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NEWS SUMMARY

GENERAL

Sir Alec explains Chile decision

...'s decision to recognise ...ew régime in Chile was ...tely justified, Sir Alec ...s-Home, the Foreign ...ary, declared yesterday. ...s in Chile fully agreed ...ur action, he said.

...Alec, who was leaving for ...N, said: "We have very ...nterests in Chile, so there ...y strong practical reasons ...ognising the new Govern... Recognition did not ...rily mean that Britain ... with the new junta's ...

...antiago, the new régime ...l up its campaign against ...eign Press. It warned that ...no plans to return to free ...olitics for the foreseeable ... Page 5

...rb road ...ffic call ... Peyton

... curbs on road traffic, ...g restricted access to ...nd cities, are necessary ... Britain being buried ... funeral pall of asphalt, ...yton, Minister of Trans... ...lustries, said. Page 9

...on kidnap ...im 'safe'

...nappers in Buenos Aires ...avid Heywood, 37, British ...nt for Nobleza, the ...e affiliate of British-...n Tobacco, reported he ... and well, the company ... London. A ransom of ...was paid in April to the ...rxist group of kidnappers ... safe return of the ...president. Page 6

...ace denial

...ham Palace dismissed as ...speculation" a Sunday ...er story that the engage... ...uld shortly be announced ...e Charles and Lady Jane ...y, 22-year-old daughter ...uke of Wellington.

...o-active ...k danger

...ng went out last night ...ntainers of radio-active ... might be washed ashore ...sh, Devon or Cornish ...ollowing the sinking of ...ow Bay, an Irish coaster, ...embrokeshire. The six con... ...ere deck-cargo, labelled ...us," and were being ...n Arklow, Co. Wicklow. ...he crew of the Arklow ...e picked up and landed ...t Milford Haven.

...rs rebuked

...scue teams saved seven ...ho had been trapped for ...s in a remote pothole ...ssington in the York... ...les, complaint was made ...potholers that they had ... one of their proposed ...underground. Two more ...s, one of them badly ...were rescued by fellow-...ear Ingleton, Yorks.

...ds return

...ain brought fresh flood-...outh-east England with ... up to a foot reported ...Kent. Over an inch of ...erday brought the total ...hes in 48 hours. All ...workmen were recalled

...ably Peron

...Juan Domingo Peron, ...ar-old former dictator of ...a, was widely expected ...turned as President in ... elections yesterday, 18 ...er he was toppled from ... a military coup.

...red

...s, called to investigate ...£100 at the Conserva... ..., Newark, Notts., found ...of notes to the basket ...Lady, the club's alsatian ...og. The rest of the ...as under her blanket.

...ly...

...Premium Bond prize-... 8PS393617 — lives in

... Whitlam, 27, the ...n of Australia's Prime ... living in London has ...d his engagement.

...les Dodd, C.H., trans... ...he New Testament, died ...-on-Thames, aged 89.

...ance was easy winner ...0 Prix Vermeille at ...p. Page 2.

...MP (C., South Norfolk) ...stand at the General ... Page 12

...poet Pablo Neruda, 69, ... Prizewinner, is dying ... in Santiago.

BUSINESS

Deadline set for monetary reform

● WORLD Finance Ministers meeting in Nairobi decided yesterday to make next July 31 their deadline for agreement on the main lines of a new international monetary system.

Mr. George Shultz, U.S. Treasury Secretary, said later that the decision by the IMF Committee of Twenty showed that some progress had been made. Back Page

● METROPOLITAN Broadcasting, the local radio group headed by Sir John Hunter, chairman of Swan Hunter, is to be awarded the Tyne/Wear radio contract. Page 27

● CONSUMER confidence improved slightly in September but remains fairly low, according to a Financial Times survey. Page 12

● FABIAN SOCIETY pamphlet suggests that the countries of North-West Europe should establish a regional authority for their seas, responsible for fishing, pollution, oil drilling and the regulation of shipping. Page 4 and Justinian

● A SECOND attempt to persuade the Government to make Merseyside a special development area is to be made by the North West Industrial Development Association.

● THE GOVERNMENT accepts in principle that special action is needed to ensure that workers due to retire this year on pensions hit by the pay standstill will not lose out.

● FRANCE had no intention of devaluing, M. Pierre Messmer, the Prime Minister, said in Sarrebourg yesterday. "It is not the fault of the French currency if others indulge in speculation."

RCA may take over Oriel Foods

● ORIEL FOODS, the group run since early this year by Mr. James Gulliver, former chairman of Fine Fare supermarkets, may be taken over by RCA Corporation of the U.S. A decision is not expected until early November. Back Page

● TANKER charter rates last week remained very high and showed few signs of dropping. Page 29

● THE National Union of Teachers is seeking an early meeting with the Prime Minister following the recent Pay Board report on anomalies which the union claims is directly responsible for a threatened breakdown of education services in London. Page 27

● WORLD STEEL producers expect the boom to continue at least until the second quarter of next year. Shortages are being experienced in almost all the main markets. Page 6 and editorial comment, Page 18

Platinum dearer

● ANOTHER rise in the price of platinum and other "noble" metals is likely following the move by Engelhard Minerals to raise its U.S. prices—on which world market quotations are based—by $8 an ounce to a range of $158-$163. Page 12

● A LEAFLET campaign by the National Union of Railwaymen will be held in London on Thursday calling for public support for speedy wage negotiations aimed at easing the staff shortages of London Transport. Page 27

● NATIONAL Savings preliminary returns for August show net receipts of £24.8m. compared with £47.8m. in the same month last year. Members of the National Savings Committee are, according to their chairman, "perturbed by the effects of unprecedented conditions in the fixed interest security market." Page 27

● THE IRISH Tourist Board, encouraged by a sudden revival in U.K. tourists this year, is to spend £120,000 on a national advertising campaign to attract more. Page 12

● FOLLOWING the revaluation of the guilder, DAF Motors (G.B.) is to introduce a floating surcharge on the prices of its Dutch-made cars. Page 41

● COMPAGNIE Française des Petroles, holding company for the Total oil group, is expected to have its shares quoted on the London Stock Exchange from Thursday. Page 28 and Lex

● PROFITS of more than £0.67m. are forecast by North Eastern Timber for 1973 (£0.4m. last year). Page 28

Phase Three plans move into final stages this week

BY RICHARD EVANS, LOBBY CORRESPONDENT

The Government's preparations for Phase Three of its counter-inflation policy move into their final stages this week, following a meeting called by the Prime Minister of his senior economic Ministers and advisers at Chequers yesterday. The proposals are due to come into effect on November 1.

No final decisions were taken at the meeting, because of the forthcoming consultations this week with the TUC, and probably with the Confederation of British Industry.

Instead, discussion centred on the options that will have to be taken up if the Government fails to win agreement with the two sides of industry.

Ministers will thus have a clearer idea after these discussions about the package of more flexible but still stringent anti-inflation proposals they consider essential after Phase Two ends next month.

Following the meetings, specific decisions are likely to be taken by the Government next week-end prior to the publication of the proposals in a document on or near October 5.

Called to the Chequers meeting were Mr. Maurice Macmillan, Employment Secretary; Sir Geoffrey Howe, Minister for Trade and Consumer Affairs; Mr. Joseph Godber, Minister of Agriculture; and Mr. James Prior, Lord President, who is responsible for the Government's legislative programme.

Mr. Anthony Barber, Chancellor of the Exchequer, is in Nairobi for the International Monetary Fund conference, and his absence was another strong indication that no firm decisions were taken.

The basic elements of the package options—which Ministers now privately accept will have to be introduced without union agreement—are believed to be:

1—Continuation of the current Phase Two annual wage increase limit of £1 plus 4 per cent. or a variation of a fixed cash sum, plus a percentage.

The percentage increase alone favoured by the CBI is unlikely to be adopted because of Government anxiety to present a socially just formula that would benefit the lower-paid comparatively more than the better-off.

Upper limit

Similarly, the CBI request for the abolition of the upper limit on pay rises of £250 is unlikely to be met.

2—An element of increased flexibility to allow employers to distribute more money to cope with restructuring difficulties, etc.

3—Payment of compensatory increases to some 1.2m. workers including civil servants and hospital manual workers who lost pay rises during the pay Freeze when their pay links with other workers were broken.

4—Provision for productivity bargaining. That would clearly be subject to rigorous restrictions to prevent abuse, but would be a popular measure with many Conservative MPs.

5—Proposals for threshold agreements which would provide automatic pay increases to compensate for rises above a specified level in the cost of living.

6—Progress towards the goal of equal pay for women which comes into full effect at the end of 1975.

Despite this week's consultations, little time remains for bridging the considerable gap between the Government and the TUC. There is no sign Ministers will accept TUC demands for restoration of free collective bargaining, substantial food subsidies, or tougher controls over all prices including food.

After the meeting of economic Ministers, Mr. Heath invited three other Ministers to Chequers last night—Mr. Robert Carr, Home Secretary; Mr. William Whitelaw, Northern Ireland Secretary; and Lord Carrington, Defence Secretary—for a discussion on Ulster.

Following his visit to Dublin a week ago, Mr. Heath is more anxious than ever to see progress towards formation of the Northern Ireland Executive. Mr. Whitelaw is expected to call together the three Northern Ireland party leaders interested in power-sharing.

CBI may meet Heath on profit margins to-morrow

BY DAVID WALKER

CONFEDERATION of British Industry leaders may meet the Prime Minister to-morrow in what could well prove a final attempt to persuade the Government to relax curbs on profit margins during Phase Three of its anti-inflation policy.

No date for the talks has yet been given officially: But after the last CBI-Government meeting at 10, Downing Street on Tuesday it was said that further discussions would come this week. Because of the Prime Minister's engagements later—including his talks with union leaders about Phase Three on Thursday—to-morrow looks the most likely day.

Although there has been some speculation that the next, and almost certainly final, round of discussions could be postponed till next week, CBI leaders are clearly anxious that they should take place as soon as possible, especially in view of the imminence of the Phase Three document.

With most of the broad outlines of Phase Three now believed to have been decided, it appears unlikely that the CBI will field a full team of representatives at the meeting, as in the past. Instead, it will probably be represented just by Sir Michael Clapham, the Confederation's president, and by Mr. Campbell Adamson, its Director General.

The major topic likely to be raised is again the effects on industry's investment of the present Price Code clauses relating to profit margin control.

The CBI leadership, which has been heavily critical of the Price Commission itself, has already made plain its fears that profits needed for investment would slump in the current financial year unless profit margin controls go and the Code is changed.

It seems doubtful that the Confederation will be successful. The Prime Minister stressed at his last meeting with the CBI leaders that statutory price controls will be at least as strict in Phase Three as at present. He has shown no signs of yielding over the profit margin question.

While the next round of discussions between the Government and the CBI and again with the TUC are expected to be the last before the Green Paper document is published, the possibility of a tripartite meeting with representatives of all three bodies present has not been ruled out.

This does, however, appear unlikely. It would almost certainly have to be held next week, clashing with the Labour Party conference and making it difficult for union leaders to attend, even if agreement on its taking place could be secured.

Chrysler reveals cost-saving plans to unions to-day

BY JOHN WYLES AND CHRIS BAUR

CHRYSLER U.K. will reveal to-day possible cost-saving steps, including redundancies and lay-offs, as top union officials try to pave the way for peace moves in the electricians' dispute which halted all of the company's car production for the past two weeks.

Both the company and the unions have been given a breathing space by the return to work to-day of 7,000 production workers at the Linwood plant in Scotland.

This follows the week-end decision of the plant's 120 electricians to suspend for a week their strike in support of the Coventry electricians, whose pay dispute is at the centre of the Chrysler U.K. crisis.

The present dispute has cost Chrysler production of 23,000 cars, worth about £25m.

The resumption at Linwood, which should enable Chrysler to make cars at its Coventry plant next week, has however made no difference to Chrysler's intention to outline to union officials to-day plans to "reduce costs substantially."

Chrysler's statement last week that it might cut back on its U.K. activities was attacked yesterday by Mr. Anthony Wedgwood Benn, Labour spokesman for trade and industry, as a breach of "solemn and binding obligations." This was later rejected by the company which said that it had honoured all of the undertakings given to the Labour Government in 1967 when Chrysler acquired a majority stake in Rootes.

Mr. Frank Chapple, president and general secretary of the Electrical and Plumbing Trades Union, and Mr. Jack Jones general secretary of the transport workers, will be among union leaders who will be told of Chrysler's cost-saving steps at a meeting late to-day.

Earlier, Mr. Jones and Mr. Hugh Scanlon, president of the Amalgamated Union of Engineering Workers, will discuss the possibilities of a TUC convened meeting of all the Chrysler unions with Mr. Len Murray, TUC general secretary.

Mr. Murray has already said he would be available at any time for such a meeting, but it remains to be seen whether one would be favoured by the EPTU.

The surprise return to work at Linwood, which began with yesterday's night shift, follows a personal appeal to the plant's electricians by Mr. John Carty, the shop stewards' convener. In agreeing to abandon their strike for a week, the electricians have taken advantage of the fact that the Coventry electricians would, in normal circumstances, be on holiday this week.

The electricians' leaders claim that this week there is technically no opportunity for Chrysler to use "black-leg" labour in Coventry—one of the issues which sparked off the stoppage by the Scottish electricians and production workers.

It remains to be seen whether, as their leaders also claim, the electricians will risk halting the Linwood plant again next week if no solution to the Coventry dispute is found in the meantime.

The return to production at Linwood, though, should ensure that supplies of parts, particularly body panels and transmission equipment, should have built up sufficiently at Coventry by next Monday to allow a restart at the Ryton factory where 5,000 employees have been laid off.

The latest development at Linwood will be part of a general discussion on the Chrysler dispute at a meeting of the EEPTU executive to-morrow.

Mr. Wedgwood Benn's allegations about Chrysler breaking its obligations to the British Government came in a radio interview yesterday.

He said that when Chrysler sought to acquire its majority holding in Rootes in 1967 it gave an undertaking it would not act to impair the company's home and overseas operations.

Mr. Benn was referring to one of eight undertakings given by the company. This was a pledge not to take action which might injure the company's relations with Government, labour, its British shareholders, and the public.

A Chrysler spokesman said the company had honoured every one of these undertakings, including investment development, but for the future "it all depends on us being able to produce cars."

Meanwhile, labour disputes will continue to preoccupy other car companies. Ford Motor has laid off 4,000 workers at its Dagenham plant as a result of a strike by 140 men over the dismissal of a colleague for allegedly threatening a foreman. The strikers are not due to meet again until Friday.

At Coventry, 2,000 British Leyland workers at the Jaguar plant are still laid off because of a strike by 600 workers and staff at Adwest Engineering, Reading, sole supplier of power-steering units.

Past causes of present troubles Page 18

Meat and eggs push up FT food index

BY ELINOR GOODMAN

RISING MEAT, egg, and frozen food prices pushed the Financial Times grocery prices index up by 2.8 points in the five weeks to September 18.

This follows two months in which seasonal factors have resulted in a drop in the index, and is a more up-to-date barometer of grocery prices than the Government index published on Friday, which shows a very small drop in August.

The FT index underlines the seasonal nature of the drop in the official index and reflects the impact of recent animal food-stuff prices rises approved by the Price Commission.

These are now evident in the shops in the shape of dearer eggs and poultry. Frozen food prices also moved up following Price Commission approval, but most of the other categories directly controlled by the Commission, like bread and canned foods, stayed relatively stable.

Details Page 14

Thomas to be Thames chairman

BY ARTHUR SANDLES

Mr. Howard Thomas

MR. HOWARD THOMAS is to take over as chairman of Thames Television next February when Lord Shawcross retires. Mr. Thomas is currently managing director of Thames and his successor will be appointed later.

Mr. Thomas, a journalist who later turned to radio and television production, is already one of the most powerful voices in British commercial television to-day. Thames is the London week-day contractor.

Men and Matters, Page 18

Mortgages: cash inflow still slow

BY DAVID WALKER

NET RECEIPTS by building societies this month could again be below the £80m. mark, as in August, in spite of the Government's pegging of bank deposit rates two weeks ago in a bid to aid home buyers.

Indications from within the movement are that the Government's action, which was followed three days later by the Building Societies Association recommendation that building society mortgage and investors' interest rates should be raised again, has so far had little effect on the flow of funds.

Although no final August figures have yet been released, it is known that the total net inflow was less than £80m., or little more than a third of the July figure.

With holidaymakers withdrawing their savings, the month is normally a relatively poor one for the movement, but the worst results came in its final two weeks and the pattern apparent then seems to have continued throughout September so far.

Government handling of the situation came under heavy attack from Mr. Harold Wilson, Leader of the Opposition, at the week-end.

Housing finance should be tackled as a national operation with the Government taking national responsibility, he told a reception for Labour Party members at Nottingham.

Housing finance had to be separated from the "day-to-day jostling and bustling of a monetary system which, because of Government policy, has got completely out of hand," he declared.

"While young families work and scrape to save the deposit on a house costing thousands and to pay the mortgage interest on it, the pampered favourites of this Government have had no difficulty in raising virtually limitless funds for land and property speculation.

"The finance of housing must become a national responsibility, not a cork bobbing about on the waves of financial speculation and greed from the tides of a monetary free market.

"As a national responsibility is how Labour will approach the problem."

The higher interest rates for building society investors do not take effect, in most cases, until the start of next month, and it is unclear whether present and potential investors have yet been influenced by the announcement of their coming introduction.

What is clear is that societies are thinking much harder about the traditional mortgage structure, including the possibility of lengthening the repayment period.

Only two major societies, the Nationwide and the Alliance, have in the past made a practice of lending money for longer than the normal 20 or 25 years.

In many cases, of course, mortgages do extend for 30 or even 40 years or more, but this is the result of previous interest rate changes where borrowers have opted to extend the repayment period rather than raise the amount they pay back each month.

Now, a number of smaller societies have changed their policy to allow 35-year loans to borrowers under certain conditions. Of the majors, the Woolwich Equitable has also decided to advance 35-years loans in some circumstances.

Some study of the possibility of making 40-year loans available to first-time buyers is also going on within the movement, although the odds seem to be against any such scheme being widely adopted.

The whole subject of extended repayment periods is one of several topics—others include a form of stabilisation fund and the possibility of establishing a link between interest rates and the cost-of-living index—being covered in a series of regular talks between building society representatives and Government officials.

ON OTHER PAGES

Letters to the Editor

BRACKEN HOUSE, CANNON STREET, LONDON, EC4P 4BY

Analysis of cash flows · Generating managers

Sir,—I would be obliged for an opportunity to comment on Professor Lawson's interesting letter of September 18.

Whilst agreeing with the broad aims he is trying to achieve in giving the shareholders more information on the value of their shares and of the basis on which their dividends are calculated, I feel that Professor Lawson has not made a case for the supply of cash flow analysis to such shareholders.

May I summarise the following points:—

(1) To fully justify the illustrated figures in his letter, he must give a reconciliation of the profit figure he quotes of £129,680 with his pre-tax operating cash flow figure of £69,906.

(2) Such reconciliation will need a break-down of past balance sheets to show how the total profits were used to increase asset values other than cash. Such asset values may be increased either by inflation, in the case of stocks, work in progress, debtors, etc., or by deliberate directorial policy, for example, take-overs or obsolescent machinery and plant replacement, or it may be a reduction of liabilities deliberate or involuntary.

(3) I would suggest, without being in any way dogmatic, that the Professor is confusing profit, that is £129,680 (which is used to purchase all kinds of assets) with pre-tax operating cash flow of £69,906 which is only one asset of many. In other words, he is ignoring the fact that shareholders are supplied annually with not only a sparse profit and loss account but with a balance sheet as well. In addition, all figures are supplied for the previous and the present year.

(4) With the above in mind, a reasonably intelligent shareholder can extract, from the balance sheet, an analysis of all changes in assets and liabilities. It would be a good idea to supply such an analysis and I would suggest that this would suffice to show how the cash flow has moved into and from the other assets which form the total business.

(5) Having said that, I suggest that it would serve little purpose to supply a proposed future cash flow using such terms as:—

(a) Debtors may increase because an increase in turnover of £x is envisaged or

(b) A product line of machines is obsolete and is due for replacement or

(c) we envisage entering the meat market and propose to purchase a majority holding in X Ltd.

Those are the ways in which cash flows are affected and the ways in which profit will be used to the detriment of shareholders' immediate dividends, but I really cannot see the directors being so candid in a document which could be read by competitors in a capitalist world.

(6) May I suggest, also, that the proposals may all be scrapped because of some new policy presenting itself during the year to the directors requiring immediate attention and

(7) The shareholders would not really expect to tie the directors so tightly to adhere to such a cash flow budget.

Professor Lawson is correct, I believe, in requiring more information in the profit and loss appropriation as to how some of the profits are to be used but not to the extent of producing a full cash flow analysis.

The balance sheets will supply past cash flows and future cash flows are no more than a declaration of directors intent, not to be relied upon.

E. W. Holland,
9, Prospect Hill,
Douglas, I.O.M.

Transfer of land

Sir,—So far as I can see, Peter Gerdes' "solution" to the land transfer problem (September 18) is exactly the system we have now. He predicates a willing vendor and an able purchaser entering into a binding commitment after issues on title, finance, structure, etc., are resolved, with the "advantage" that until they do the vendor can quite morally entertain countless "non-binding" interests. How this elegant solution differs from the present structure of pre-contract inquiries is likely to defeat others apart from myself. But perhaps Mr. Gerdes has been led astray by the contract-conveyance structure into believing that the contract is not binding.

The problem on land transactions is that both purchaser and sometimes vendor are exposed to a good deal of trouble and expenditure once they have agreed in principle to a transaction, and before they can possibly commit themselves to the purchase.

The purchaser may well have to pay considerable fees for survey and mortgage application and some fees for local searches before he can commit himself; the vendor may have to do the like with a replacement property before he can contract to sell the initial one. When people are buying houses against very tight margins (as they often are) it is the rendering of these expenses abortive that creates injustice and hardship.

There is no solution to the problem of people playing fast and loose with housing sales in a free housing market. But there should be a remedy for the man who incurs loss, relying on an agreement in principle, when that agreement (not the agreement to sell the house) is repudiated. The answer may be to imply into an agreement to sell in principle (whether described as being subject to contract or not) a term that if the vendor does not subsequently tender a contract complying with that agreement the purchaser shall be entitled to recover expenditure incurred as a result of it—with comparable cover for a vendor.

David Green.
Rhyd yr Harding,
Castle Morris,
Nr. Haverfordwest, Pembs.

Test of EEC law

Sir,—Justinian's article on the Esso Kingswood Motors case in your September 17 issue rightly congratulates the Judge on the model clarity and helpfulness of his decision. But unhappily the writer adopted yet again those unfortunate expressions "compulsorily notifiable" and "non-notifiable." Practitioners in the field understand this legal shorthand, but for the lay reader it is bound to cause confusion, and indeed has already done so in a great many cases.

The fact is of course that there is no such thing as a "compulsorily notifiable" agreement. A notification is an application for the agreement concerned to be exempted under Article 85 (3) of the Rome Treaty from the prohibition of Article 85(1), and it normally includes an alternative request for a declaration ("negative clearance") that Article 85(1) does not apply to the agreement at all.

The law provides that an agreement cannot be exempted under Article 85(3) unless—

(a) it has been notified, or

(b) it falls within certain special classes (for example an agreement between two concerns in one member-state not affecting imports or exports) which can be exempted even if not notified. But such agreements may be notified if one or both parties so wish.

The expression "compulsorily notifiable" thus refers to those agreements which cannot be exempted unless notified and "non-notifiable" to those which can. But there is no offence in not notifying the one and it is perfectly permissible to notify the other. But whether notified or not, if an agreement is caught by Article 85, the parties can be heavily fined for operating it.

One of the reasons why the expression "compulsorily notifiable" is so misleading to British readers is that certain restrictive agreements are in fact compulsorily registerable under the Restrictive Trade Practices Acts.

We really need a pair of new expressions for the EEC cases, and anything reasonably brief as well as accurate is hard to find. The best I can suggest would be "exemptable un-notified" and "not exemptable un-notified"—which are pretty horrid.

J. B. Bransbury,
Burkes Grove,
Beaconsfield, Bucks.

Use of credit cards

Sir,—Your recent article on Credit Cards prompts me to write about my recent experience with Barclaycard. I think it illustrates your correspondent's view that Barclays are only interested in customers who use them to provide extended credit.

Last January, rather than risk paying 18 per cent. per annum interest, I accidentally overpaid my Barclaycard account by £34. Barclaycard sent a statement each month overstamped with an offer to refund it. In June, I drew out £30 cash on my Barclaycard. The next statement showed that I had been charged 2½ per cent. or 75p to reclaim my own money.

Letters of complaint had no effect, the manager appears incapable of distinguishing between a borrower who is charged 30 per cent. per annum and a customer who is repossessing his own money. Barclaycard still send statements showing that I have £4 in credit and offering to refund it. The way Barclays do business I do not think I can afford to take up their offer.

J. H. Wright,
16 Princess Grove,
Wistaston,
Crewe, Cheshire.

Generating managers

Sir,—Because I have quite a lot to do with the business, academic and education worlds, I have been following with interest your graduate/non-graduate correspondence. I am inclined to agree that the academic idiom is different from the operative idiom needed in business. School and university strive to hone the critical intelligence which tends to be passive and to make information do its thinking for it. The academic prefers a small area intensely studied, whereas the business executive has to operate in a large, only partially known, area. For this he needs a generative intelligence which is active and expressed in decisions, planning, problem-solving, ideas, etc. Unfortunately education makes no effort to develop this type of intelligence.

It was to remedy this deficiency that the Cognitive Research Trust set out to introduce "thinking" (in its active sense) as a direct subject in schools from eight to 17 years. The response from heads and teachers has been so good that after less than one year the subject is being tried in over 5 per cent. of all secondary schools (representing some 250,000 pupils). The results have been surprising and show rather embarrassing differences between those doing this subject and the rest.

I believe there is a need for both the academic and the operative idiom, but at the moment the academic idiom has almost complete dominance in education. For instance, in hours of tape-recorded discussion on careers, many sorts of profession are considered, but never that of manager. I do not think this is because of the bad image which business certainly has in most areas of education, but because the type of thinking used by a manager is not academically recognised. Of course, the operative idiom is not special to the business world but is to be found wherever there is something that actually has to be done—instead of just contemplated.

Edward de Bono,
Hon. director, Cognitive Research Trust.
11, Warkworth Street,
Cambridge.

Employment of women

Sir,—The Leeds Junior Chamber of Commerce is currently obtaining information and opinion on the influence of the female work force in this country.

It is a fact that the number of women employed full time, both before and after marriage, is increasing each year, and in many industries and administrative centres they are the majority of workers—the silent majority. They take, generally speaking, little part in the management of their companies, or the management of their own affairs through their trade union. Certainly it is also true that men do not take part as a rule in running their own work affairs but instead react to the decisions of the few who organise their companies or unions—but are the reasons for this different?

Are men dulled into apathy by the necessity to maintain employment and thus earning power to support their families? On the other hand do women really care about work conditions or job efficiency, or do they work for the money alone? Do men in management really act as "Chauvinistic Pigs"?

We believe that the economic machinery of this country has accepted that large numbers of women wish to be permanently employed and as a result industry has geared up to this position. What would happen if all the women in this country decided to stop work?

What would happen to industry or commerce in Leeds? How would the acute shortage of labour affect the wage and salary levels of the employees remaining?

We are currently obtaining statistical information and historical background as a basis to the report we intend to produce but an important feature of the report will be the personal views of individuals as well as the views of employers and trade unions.

Your opinion is important so please help us by letting us know what you think on the subject. Similarly if you have any interesting information, especially early historical details of women at work, we shall be very grateful.

Malcolm Hendy,
Project Manager,
c/o 29, Aspin Park Road,
Knaresborough, Yorkshire.

Speed limit and accidents

Sir,—It was indeed refreshing to note Mr. Lawrence's pertinent comments (Sept. 15) on speed limits.

Cursed as we have been and are with a succession of Ministers of Transport totally ignorant of the facts but willing at all times to impose restrictions, it would appear that we must all continue in convoy on Motorways, for the foreseeable future, even though in a really democratically governed country surely an experimental period without limits should long since have been tried?

Experience in the U.S., where the only limit-free State has a better casualty record than most imposing a strictly-enforced limit and not least in my own County of Kent where quite recently an experimental period of *increased* limits resulted in an immediate and sharp decrease in the accident rate on the trunk roads concerned, shows that Mr. Peyton, all blissfully unaware, may well have on his conscience dozens if not hundreds of deaths directly attributable to a majority of motorists being forced by restrictions to remain in the lower speed bands within which 90 per cent. of fatal casualties on our roads occur.

In due course, when the nonsense of coaches and heavy lorries—being officially regarded as "safe" at 70 but modern cars "unsafe" at 71 mph has been seen to be a nonsense even by officialdom—perhaps even, eventually by a Minister of Transport—the ineffable Mrs. Castle and her ilk may learn that they have been directly responsible for the deaths of many of the citizenry through the original imposition and continuance of a measure quite positively harmful in its effects, and the official attitude it engenders, to all road-users.

A. F. Lilley,
Kingsdown Park House,
Tankerton, Whitstable, Kent.

A multi-racial society

Sir,—Joe Rogaly adds his name to those who claim that Britain is now a multi-racial society.

There is no doubt that such a situation would be against the wishes and interests of the native British. Perhaps, therefore, those who agree with Mr. Rogaly will suggest the necessary action to reverse this phenomenon. Otherwise we will be faced with an irreversible *fait accompli*, and in this case I am sure we would all feel very sad that the legitimate desires of the nation had been so undemocratically neglected.

A. R. Marlow,
Kempson House,
Camomile Street,
London, E.C.3.

Wishes of the voters

Sir,—It may be accidental but Mr. Simeons (September 13) appears to have an unhappy knack of assuming that the general run of electors is a not very sagacious breed. That is why so many rational people experience less than affection for our political organisation.

Only alarm could be inspired upon hearing, in the BBC "World At One" programme, that some Government MP's advocate frankness in respect of the Ulster implications.

This admission that frankness may not have been practised to date must disturb individuals with personal knowledge of those implications but who find a platform denied them if they try to speak too honestly.

It is said that education is dangerous because it teaches people to think: when they do so, then thrones topple. Whatever Joe Rogaly believes, education has made such huge strides since 1939 (yes, 1939, because that was the year when millions of men began to think) that people are no longer the political serfs of pre-war days.

What has been learned is politicians are not to be beli implicitly. More unfortunate. feeling is widespread politicians are not to be beli at all.

When confidence in a nat political integrity is rupt then an unhealthy morale o the way for a variety of s diseases to attack the coun moral fibre. Britain is soc unhealthy and Mr. Simeons his colleagues are returne Parliament in the expec that they will place the na needs before the interest their party's ambitions.

Failure to respect that ol tion has had serious consequ whose fuller repercussion have yet to endure.

E. A. Marsh,
25, Garland Road,
Poole, Dorset.

Earnings fror commodities

Sir,—It is more true now at any time in our history, we need to increase our ex by a substantial margin.

One way the Government help is to permit one o leaders of what is euphen ally referred to as "inv exports," the commodity m of this country, to retain part of their profits untax be used only as reserves, reserves to be used on security for credit, a vita of financing commodities, have recently risen so rapi

Industry has this help in ing its machinery, and indi Government subsidies for Capital is the machinery commodity markets. Know and instinct are two other tials for dealing in commo

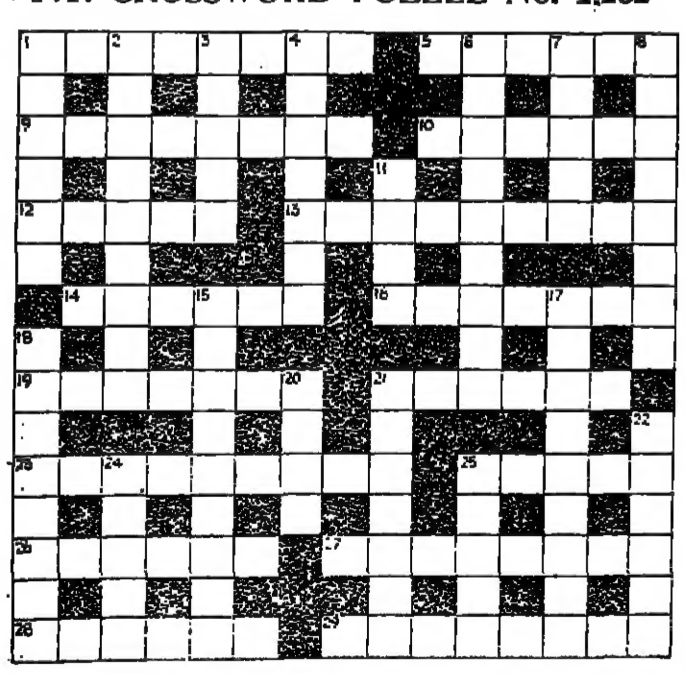
A long experience in a modity market has shown other countries accept U.K modity markets as the reliable. No one know annual total of earnings o dealings by U.K. firms in seas markets. The Ba England has been succes raising its totals of such de but at best there must be of guess work, especially such deals are between countries outside the U.K.

Since 1939 the U.S. w far greater resources has an increasing share of thi of business, but person perience has shown a pref by overseas concerns to c the U.K.

It would only need a amendment to the finan to cover this change in t law. Firms would ne account for these reserves tax authorities annually.

A. Meredith Jones,
La Ferme Vinchelez,
St. Ouen, Jersey.

F.T. CROSSWORD PUZZLE No. 2,282



ACROSS

1 and 5 "The pleasing punishment that women bear" (—) (6, 2, 6)
9 Money puts to the test those who are on guard (8)
10 Not one gets on with this idea (6)
12 Not friendly, but we want the time to ask after it (5)
13 Shy relative joins the excursion (4, 5)
14 Abolish what sounds a recommendation for a commercial traveller (6)
16 No doubt in some way under obligation (5, 2)
19 Interpretation in Berkshire (7)
21 Just average means (6)
23 Ships include the right for pennants (9)
25 Here's a toast to the singer (5)
26 Settle a means of illumination (6)
27 Weapon for a zealous supporter (8)
28 She does it in play to get the victory (6)
29 An animal we put quietly in the ground (8)

DOWN

1 We mount up the ready tree (6)
2 Hiawatha's bride (9)
3 A classic hat (5)
4 Altogether protective clothing (7)
6 Dora quits one form of law enforcement (4, 5)
7 A college window (5)
8 Al junior (5, 3)
11 Turned up to rebuke (4)
15 Chopin has restored the place for crocks (5, 4)
17 Comes running when both horses win (7, 2)
18 It's a sin dad's in the lock (8)
20 "Full well they laughed with counterfeited ——" (Goldsmith) (4)
21 Meal time can be a revelation (7)
22 To learn about the girl can be worth a couple of points (6)
24 Hard cash? (5)
25 Mother to Caesar, for example (5)

The solution of last Saturday's prize puzzle will be published with names of winners next Saturday.

TV Radio

† Indicates programme in black and white.

BBC 1

9.38 a.m. For Schools, Colleges. 12.20 p.m. A Chance to Meet: Dr. Immanuel Jakobovits, the Chief Rabbi. 12.55 Cwn Defaid: Sheepdog trials. 1.25 News. 1.30 Andy Pandy. 1.45 The Fanatics. 2.02 For Schools, Colleges. 2.50 Times Remembered . . . 3.00 Scope. 3.30 Reporter at Large. 4.00 Play School. 4.25 Yogi Bear. 4.35 Jackanory. 4.50 Blue Peter. †5.15 The White Horses. 5.40 Adventures of Parsley.
5.45 News.
†6.00 Nationwide.
6.45 Sykes.
7.15 Star Trek.
8.00 Panorama including an interview with Rt. Hon. Harold Wilson, MP, Leader of the Opposition.
8.50 Natural Break.
9.00 Nine O'clock News
9.25 "How to Save a Marriage . . . and Ruin Your Life," starring Dean Martin.
11.05 Mastermind.
11.35 Late Night News.
11.40 A View from Richard Baker.

All Regions as BBC 1 except at the following times:

Wales—†1.30-1.45 Ar Lin Mam. 6.00-6.45 Wales To-day. 6.45-7.05 Heddiw. 7.05-7.15 Tom and Jerry. 7.15-8.00 Wonderful World of Disney. 11.05-11.35 Football Preview. †12.07 a.m. News of Wales.

Scotland—6.00-6.45 p.m. Reporting Scotland. 11.45-12.15 a.m. Kings, Lords and Commoners. 12.15 Scottish News Headlines.

Northern Ireland—6.00-6.45 p.m. Scene Around Six. 12.07 a.m. Northern Ireland News Headlines.

England—†6.00-6.45 p.m. Look North (from Leeds, Manchester, Newcastle); Midlands To-day (from Birmingham); Look East (from Norwich); Points West (from Bristol); South To-day (from Southampton); Spotlight South West (from Plymouth). †12.07 a.m. Regional News Headlines.

BBC 2

11.00 a.m. Play School.
†5.25 p.m. Open University.
7.30 News Summary.
7.35 Opinion: Education.
8.00 The High Chaparral.
8.50 Call My Bluff.
9.25 Horizon.
10.20 Then and Now.
10.50 News Extra.
11.20 Open Door: The Aetherius Society.

LONDON

9.30 a.m. Schools Programmes. 12.05 p.m. Mr. Trimble. 12.25 Sing to the Animals. 12.40 First Report: News with Robert Kee, FT index. 1.00 Mr. and Mrs. 1.30 Emmerdale Farm. 2.00 Farmhouse Kitchen. 2.25 Good Afternoon! †3.00 A Family at War. 3.55 Whose Baby? 4.25 Clapperboard. 4.50 Freewheelers. 5.20 . . . And Mother Makes Three.
5.50 News from ITN.
6.00 The Shadoks, followed by To-day.
6.40 Opportunity Knocks!
7.30 Coronation Street.
8.00 World in Action.
8.30 Singalongamax.
9.00 Crime of Passion.
10.00 News at Ten.
10.30 Drive-In.
11.00 Planting for Pleasure.
11.30 Here We Go Again.
12.00 Archbishop Roberts: Hugh Kay talks with Archbishop Roberts, now in his eighties, about his life and times and the problems of the world to-day.

All ITV Regions as London except at the following times:

ANGLIA

2.50 p.m. Housepartv. 6.00 About Anglia. 10.30 Gardening Diary. 11.00 Man In A Suitcase. 11.55 Drive-In. 12.20 a.m. Faith At Work.

ATV MIDLANDS

6.00 p.m. ATV Today. 10.30 Citizens' Rights. 11.00 Angling Today. 11.30 A Christians at Large. 11.35 Man In A Suitcase.

BORDER

6.00 p.m. Border News and Lookaround. 6.15 Look Who's Talking. 10.30 Border Month. 11.15 Drive-In. 11.45 The Adventurer. 12.12 Border News Summary.

CHANNEL

12.58 p.m. Channel News Headlines. 2.00 Let's Face It. 2.30 Women Today. 6.00 Channel News. 6.10 Survival. 10.30 Branded. 11.00 Journey to the Unknown. 12.00 News and Weather in French followed by Channel Gazette.

GRAMPIAN

12.00 Mid-day Round-up. 2.25 p.m. At Your Service. 6.00 Grampian News. 6.05 The Royal Clansmen. 11.00 Mathnian. 11.20 Longstreet. 12.15 a.m. Meditation.

GRANADA

6.00 p.m. Northern News followed by What's On? 6.10 This Is Your Right. 6.25 Bugs Bunny. 10.30 Crime and Mystery: "The Outrage" starring Paul Newman.

HTV

1.00 p.m. The White Line. 2.30 Housecall. 6.00 Report West. 6.22 Report Wales. 10.30 Police Surgeon. 11.00 Late Night Cinema: "Dracula" starring Peter Cushing and Christopher Lee.

SCOTTISH

2.00 p.m. Whicker in Europe. 2.30 Housecall. 4.25 The Adventures of Superman. 6.00 Scotland Today. 6.30 Professor Balthazar. 10.30 The Melody Lingers On. 11.00 Angling Today. 11.30 Late Call. 11.35 Upper Crusts.

SOUTHERN

2.30 p.m. Houseparty. 6.00 Day by Day. 10.30 The Memory Hot. 11.00 The Streets of San Francisco. 11.55 Southern News Extra. 12.05 a.m. Farm Progress.

TYNE TEES

9.20 a.m. In Times Like These. 4.25 p.m. The Osmonds. 6.00 Today at Six. 6.35 Cartoon Time. 10.30 In The Picture by Melvyn Bragg. 11.00 The Streets of San Francisco. 11.55 Late News Extra. 12.10 a.m. The Protectors. 12.40 Lectern.

ULSTER

†12.59 p.m. Ulster News Headlines. 2.30 Women Only. 4.23 Ulster News Headlines. 6.00 UTV Reports. 6.15 Me And The Chimp. 10.30 Monday Night with Very Rev Canon J. G. McGarry of St. Patrick's Ballyhaunis, Co. Mayo. †10.40 Monday Movie: "A Cold Wind in August" starring Lola Albright.

WESTWARD

12.23 p.m. Gus Honeybun's Birthdays. 12.35 Westward News Headlines. 2.00 Let's Face It. 2.30 Women Today. 6.00 Westward Diary. 6.20 Sports Desk. 6.35 A Date With Danton. 10.30 The Summer of '73. 11.00 Westward Late News. 11.03 Journey to the Unknown. 12.00 Faith for Life.

YORKSHIRE

6.00 p.m. Calendar. 10.30 Emmerdale Farm. 11.25 The Streets of San Francisco. 12.20 a.m. Uncharted World.

RADIO 1 247m

(S) Stereophonic broadcast

Time, traffic, and News summaries at 5.00 a.m., 5.30, 6.00, 6.30 then every hour on the half-hour until 6.30 p.m., 7.30, 8.30, 9.30, 11.00, 12 midnight, 1.00 a.m., 2.00. Weather at 5.02 a.m., 5.32, 6.02, 6.32, 7.32, 8.32, 6.32 p.m., 2.02 a.m.

5.00 a.m. As Radio 2. 7.00 Noel Edmonds. 9.00 Tony Blackburn. 12.00 Dave Lee Travis including 12.30 p.m. Newsbeat. 2.00 David Hamilton. 5.00 Radio 1 Club with Rosko from Bloomers Cabaret Disco Club, Birmingham including 5.30 Newsbeat. 7.00 As Radio 2. 10.00 Sounds of the 70s; Bob Harris (S) also on VHF. 12.00-2.02 a.m. As Radio 2.

RADIO 2 1,500m and VHF

Time, traffic, and News summaries at 5.00 a.m., 5.30, 6.00, 6.30 (VHF and 247m), 7.00, 7.30, 8.00 then every hour on the hour until 3.00 p.m., 4.00, 5.00, 6.00, 6.30, 7.00, 8.00, 9.00, 10.00 (VHF), 11.00, 12 midnight, 1.00 a.m., 2.00. Weather at 5.02 a.m., 5.32, 6.02, 6.32, 7.15 and 247m, 7.02, 7.32, 8.02, 9.32, 12.15 p.m., 5.49, 6.15, 6.32, 2.02 a.m.

5.00 a.m. News summary. 5.02 Barry Aldis (S) with The Early Show including 6.15 Pause for Thought. 7.02 Terry Wogan (S) introduces Trini Lopez this week's Radio 2 star, at 8.10, including 8.27 Racing Bulletin and 8.45 Pause for Thought. 10.02-11.30 Pete Murray's Open House (S) including 10.30 Waggoners' Walk. 11.30 Jimmy Young (S). 1.30 p.m. Tony Henderson (S) and music in singalong style including 1.45 and 2.45 Sports Desk. 3.02-5.00 John Dunn (S) including 3.45 Sports Desk. 4.15 Waggoners' Walk and 4.15 Sports Desk. 5.02 Tony Brandon (S) including 5.45 Sports Desk. 6.50 Sports Desk. 7.02 The Navy Lark. 7.30 On Stage Tonight. 8.32 Humphrey Lyttelton with The Best of Jazz on records. 9.32 The Big Band Sound (S). 10.02 Late Night Extra (1500m (202m in Scotland) including 10.15 Sports Desk. 12.00 Midnight Newsroom. 12.05 a.m. Night Ride (S). 2.00 News Summary.

RADIO 3 464m, Stereo & VHF

7.00 a.m. News. 7.05 Overture: Schubert, Dvorak (S). 8.00 News. 8.05 Morning Concert. J. C. Bach, Beethoven (S). 9.00 News. 9.05 This Week's Composer: Byrd (S). 9.45 BBC Midland Light Orchestra: Vaughan Williams, Raymond Warren, Saint-Saëns, Burgmuller (S). 10.35 New Records: Haydn, Stephen Dodgson, Walton (S). 11.35 Composer and Pianist: Geoffrey Bush (S). 12.15 p.m. Mid-day Concert, part 1: Chopin (S). 1.00 News. 1.05 Concert, part 2: Vaughan Williams (S). 1.55 Lee Kum Sing piano recital. Bartok, Brahms (S). 2.30 Hanns Eisler concert. 3.00 Music for the Wesley Family (S). 4.35 Organ recital (S). 5.15 Bandstand (S). 5.45 Homeward Bound. 6.05 News (medium wave only). 6.10 Homeward Bound (continued) (medium wave only). 6.30-7.30 Study on 3 (medium wave only). 7.30 Joan Sutherland sings arias from 19th-century French operas (S). 8.00 The Day of Atonement (history and liturgy of the Jewish Festival). 8.30 20th-Century Masterpieces of Sacred Music, part 1: Messiaen, Hindemith. 9.25 Aspects of the Short Story. 9.45 Concert part 2: Schoenberg, Stravinsky. 10.35 The Poetic Garden (talk). 11.10 Claude Franck (S). 11.55 News.

RADIO 4

434m, 330m, 285m and VHF

6.25 a.m. News. 6.27 Farming Week. 6.45 Prayer for the Day. 6.50-8.45 To-day. 6.50 (medium wave only) Travel News What's On and Keep Fit. 6.55 Weather, programme news. 7.00 News and more of To-day including 7.25 Sports Desk. 7.35 To-day's Papers. 7.45 Thought for the Day. 7.50 Travel News (medium wave only). 7.55 Weather programme news. 8.00 News and more of To-day including 8.25 Sports Desk and 8.35 To-day's Papers. 8.45 Yoga. 9.00 News. 9.05 Start the Week with Richard Baker. 10.00 News. 10.05 Wildlife. 10.30 Daily Service. 10.45 Morning Story (medium wave only). 11.00 News (medium wave only). 11.05 Portrait of a Place (medium wave only): Queen Victoria at Osborne. 11.45 It Takes All Sorts. 12.00 News. 12.02 p.m. You and Yours. 12.27 Desert Island Discs. 12.55 Weather programme news (medium wave only). 1.00 The World at One. 1.30 The Archers. 1.45 Woman's Hour (2.00-2.02 News) (medium wave only from 2.00). 2.45 Listen with Mother (medium wave only). 3.00 News. 3.05 Afternoon Theatre. 4.35 Story Time: The Leonard part 1. 5.00 PM Reports. 5.50 Stock Market Report (medium wave only). 5.55 Weather, programme news. 6.00 News. 6.15 Just a Minute. 6.45 The Archers. 7.00 News Desk. 7.30 Frank Muir Goes Into . . . The Family and investigates the subject with the help of Alfred Marks. 8.00 The Monday Play: "Susanna Andler". 9.30 Weather. 9.30 The World Tonight. 10.15 A Book at Bedtime. 10.30 Kaleidoscope. 11.00 The Jewish New Year: talk by Dr. Immanuel Jakobovits. 11.15 News. 11.30-11.35 Market Trends.

Radio 4 VHF for Schools: 10.05 a.m. to 12.00 and 2.00 p.m. to 3.00.

Racing

Starring Nopac

by DARE WIGAN

THERE is the prospect of an exciting dual at Leicester this afternoon when Rapid River and Supreme Gift renew rivalry in the Barleythorpe Stud Stakes (3.15) for which the sponsors have contributed half of the £3,000 added prize money, including a nomination to their resident stallion, Mummy's Pet.

At the beginning of the season, *Supreme Gift*, who had showed promise in his only two races last year, appeared likely to make up into a useful three-year-old, but few expected him to become one of the leading sprinters in Europe, which he undoubtedly is.

After comfortably defeating the smart Brave Lad in the Television Viewers' Handicap at Haydock last month, Supreme Gift went to Doncaster where he was a heavily-backed favourite for the Portland Handicap. There, Brian Swift's grey colt drew clear of his 14 rivals in the final furlong and had three lengths to spare over Tickled Pink, with Rapid River the same distance away, third.

Rapid River is 15 lb better off here, but though it is likely to be a close thing between them I expect *Supreme Gift* to come out the better again. The Go-Between, Silver God and Eveneca are the other runners, but I doubt any of them troubling the pair I've mentioned.

There are three other meetings to-day, at Bath, Hamilton and Plumpton. The trainer and jockey combination of Ryan Price and Tony Murray have done well at Bath this year and they have two good prospects this afternoon in *Nopac* and *Barrow Boy*.

Nopac runs in the Luckington Nursery Handicap (3.0) in which he carries 8 stone 3 lbs. This rangy colt by King's Leap, ran on gamely to get the better of Cashmere Love by a short head at Salisbury in July, but he has not won since. However, he performed creditably on his most recent outing — when runner-up to Bless This Horse at Chester earlier this month. He will be well suited if there has been rain overnight, and is certain to stay a mile. He is a reasonably confident selection.

Barrow Boy ran well for most of the way in a competitive maiden race won by Wishing Stone at Newbury the other day, and he has less to do on this, his second appearance, in the Tormarton Plate (4.0) in which I expect him to be too fast for Aspire.

There is a disappointing field for Hamilton's Lord Hamilton of Dalzell Memorial Nursery Handicap (3.30) and I am hoping that *Pewsey* will win. This consistent filly, trained at Ayr not far from the course, made nearly all the running when scoring at Edinburgh in May and has been placed in her last five races.

At Plumpton, where there are few runners, the principal race is the Drones Restaurant Hamburger Handicap Hurdle (3.0) for four-year-olds and upwards. *Boy Tudor* will be at short odds to win his first race of the season and I shall be surprised if he does not do so.

Lester Piggott rode Mr. G. A. Oldham's Tempio to an easy victory in the £9,731 Prix de Solferino, a 10-furlong race for three-year-olds.

SELECTIONS

LEICESTER

2.45—Nyssa
3.15—Supreme Gift
3.45—Miss Baill
4.15—Tulchan
4.45—My Bernie

BATH

2.00—Highland Lassie
2.30—Salt and Pepper
3.00—Nopac
3.30—Noirmont Point
4.00—Barrow Boy

HAMILTON

3.00—Anton Lad
3.30—Pewsey
4.00—Autumn Double
5.00—Limner

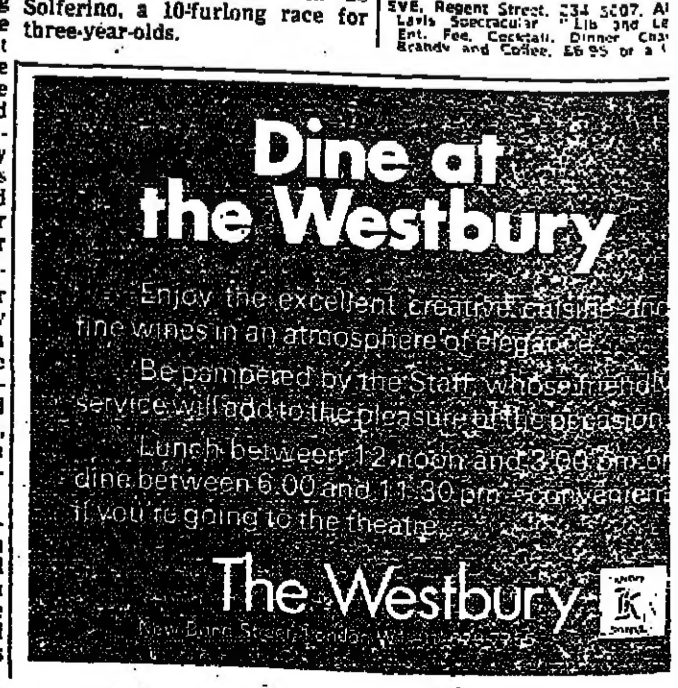
PLUMPTON

3.00—Boy Tudor

Allez Franc slams Dahlia

ALLEZ FRANCE, owned Daniel Wildenstein and by Yves St. Martin, wo £57,000 Prix Vermeille at champ. The three-year-ol produced a startling run straight to outclass the fi what was seen as a form for next month's Ar Triomphe.

Dahlia, the 9 to 10 fav who won the Irish Guinnes and the "King George" (lengths from Rheingold), fi only fifth. It was the thir this season that Mr. Bunker Hunt's filly had l Allez France, who is now c to be favourite for next m Arc de Triomphe, Eu richest horserace. Last winner, San San, also wo Prix Vermeille.



gow University

Musica Nova

by GILLIAN WIDDICOMBE

king back over this y, fruitful week organised ofessor Rimmer and the h National Orchestra, I help wondering which will be remembered by odd student composers om the lectures, seminars ehearsals were primarily d. Were they so delighted was by hearing György refer, in rapid Budapest ı. to the static viscous er of his own music as alade"? Did they realise he down-to-earth advice modestly by Martin is more productive than ly copying Boulez or ausen? And accustomed, a few years students must the stimulus of a ous, extrovert society, they honestly appreciate eter Maxwell Davies had nspired by the desolute of Orkney?

week was a paradox. I . The personal trimmings necdotes were the point Musica Nova course, g the kind of insight cannot be obtained by over endless new scores; garnish only serves to our evaluations of the qualities of the four new performed in Saturday's oncert at City Hall. So say without further delay of these were important es of first rate pieces, Ligeti's Double Concerto Maxwell Davies' *Stone*

ıg the week. Maxwell talked cheerfully about ıgs he has written on the of Hoy in Orkney, and sections of his film music *e Devils* and *The Boy* to illustrate his personal e of orchestration, which sembles an eerie, ironic rd puzzle, ever more deft xtraordinary. But dis- *Stone Litany* he seemed oncerned to communicate al content than to technical processes, like orhythmic canon and of 13 featured therein. s with matching joy that urday, when the clouds onfusions of rehearsal we realised this 20 work is one of supreme eauty, surely one of the expressive, lyrical and refined pieces he has yet written.

Stone Litany is less elaborate than some of Davies' recent chamber works: much less complex, for example, than the *Hymn to St. Magnus* which preceded it. But it is a taxing work, cruelly demanding a soprano to range from low F to high C, and detailing her line with melismatic flurries and sophisticated decorations of wicked difficulty. *Stone Litany* is a setting of the Runic inscriptions in Maes Howe, arranged as four songs separated by orchestral interludes; but the words, full of mystery and ambiguity, and incomplete anyway, have been used phonetically, and the style of the voice is largely instrumental until the last song. (This Davies twists into a wry little recitative-like epilogue: "Makus [Maxwell] the Mighty carved these runes." as the time honoured signature of the graffiti writer.) The orchestral scoring is magical, with atmospheric use of a large percussion group including a flexotone that sighs and moans like wisps of wind over stark, economical string writing, cold as stone.

Ligeti, on the other hand, was obviously happy to expose the aural tricks which are continued in his new concerto, and traced their development through previous compositions. He showed us how, in the harpsicord piece *Continuum*, he proved that a long ostinato sequence of trills and shakes could give the impression of continuous sonority; and how, in his *Requium*, a veil of microtonal sounds could be manipulated by twists or "fences," to give a feeling of concise movement. And he chose "micropolyphonic" as an analytical term for those too shy to use "marmalade."

His new concerto, played once before at last year's Berlin Festival, is woven in much the same way as his Chamber Concerto for 13 instruments, but is in two movements only, lasting some 16 minutes. The flute and oboe soloists have little solo work to do, and the contrast of thickly divided lower strings (there are no violins) against overlapping trails of woodwind provides the main material of the work, mostly soft in dynamic character. The first movement is a slow, calm microtonal haze rising in a single arch; the second, recalling the fourth movement of the Chamber Concerto, features fast, simple patterns flipped over and over. Both movements reach one or two moments of strange repose or resolution, like the first time the flute soloist uses his alto instrument, and the hurried rush up a couple of octaves where the door to a store of new pitches is suddenly opened. Incidentally, Ligeti himself is a charming, energetic and amusing lecturer, and I hope he will be lured here from his home in Hamburg more often.

A pity that Luciano Berio was ill and unable to come in person, for his *Still* was the only work that needed special pleading. A fifteen minute sequence of unison plonks, hesitantly separated by unequal silences, it suggested a scherzo-like study designed to fit into a larger work; a silly, boring piece heard on its own. Or is it something to do with his earlier *Bewegnung?*

But the young Scottish composer Martin Dalby survived admirably in this international company, with an effective, amorphous piece called *The Tower of Victory*, which successfully demonstrated his own advice about getting to know what is possible and practicable in the expanded percussion section of the contemporary orchestra.

Alexander Gibson and the SNO coped patiently with these four demanding scores, discomforted only by the unkind barring of the Berio. The flute and oboe soloists whose mellifluous tone eloquently explains why Ligeti returns to traditional instruments after experiments in Kolnig's electronic studio were William Bennett and Michael Dobson; and Jan de Gaetani was the spectacular soprano who sang clear as a piccolo and dark as a viola in *Stone Litany*. Indeed, the only grumbles heard during this informative and enjoyable week concerned the lack of scores for students to follow, some windbag questions at forum sessions, and the dearth of decent restaurants in Glasgow.

The Entertainment Guide is on Page 14

Sadler's Wells Theatre

Duets

by CLEMENT CRISP

Ballet Rambert's return to Rosebery Avenue this season seems to me to be enhancing both ballets and dancers. I was never an admirer of the Cochrane Theatre's auditorium —mournfully lit as if we were to pay our last respects to some dear departed, rather than enjoy a vital dance company—and at the Wells the repertory thus far has benefited both from more space, from a more conventional proscenium arch, and from some of the best lighting (by John B. Read and John Anderton) to be found in the London theatre.

On Friday night, with a change of bill, *Blind-Sight* was as exciting in its visual effects—despite intermittent flashes from the silver bars that edge the set—as it was powerful in its performance. Dominating it once more was Christopher Bruce as the tribal fetish and bully-boy: pampered, vicious, chilling in his contempt for the blind girl (Julia Blaikie) and making intensely memorable a single sly passing kick at her body which became the very essence of callous nastiness. I don't know how any action quite so beastly can be made to seem so beautiful, but Mr. Bruce's timing and his unforced authority make the gesture a complete summation of this haunting work.

Mr. Bruce also provided the second new ballet of the season. His progress over the past few years as a choreographer has been steady and entirely consistent: what I take to be a deep concern with man's inhumanity has been given very deliberate imagery, with gesture and movement having an almost contemplatory precision.

Now, in *Duets*, he has turned to plotless, clear-textured writing, to produce a sequence of dances which grow from silence and dark and embryos of movement to a peak of activity and sound and light and then diminuendo back to their first state. The setting by Nadine Baylis is a green-adged suggestion of lawns and hedges and fields; the electronics by Brian Hodgson start from single bell-sounds and develop in pitch and intensity; three couples in simple blue dress are gradually stretched in bolder and stronger movement. The whole tone is pastoral, serene, tenderly attentive rather than overtly loving in its relationships, a work at peace with itself.

Its structure relies much upon canonic form — simple curves and not so simple extensions of those curves pass from one dancer to another, are repeated, picked up, embellished. The whole feeling of *Duets* is harmonious, understated, but it still casts a spell, albeit that spell takes time to make its effect. I have only seen it once, and I must refrain from further judgement until a second and third viewing; but the initial image is so refreshing in its feeling of a green thought in a green place that I can't believe that I shall not learn to enjoy it even more. It is well, sensitively danced.

The programme closed with Tetley's *Rag-Dances*, and, like the rest of the repertory, benefiting from the Wells' stage. Particularly fine on this occasion was Gideon Avrahami's exposition of the long closing solo which seems a meditation on all the suffering that has gone before—a man returning to Dachau when the last horrific human debris had been removed. Profouundly serious, sternly underplayed, it is a remarkable account of a remarkable dance. Casting elsewhere was much as we have seen before, though Nicholas Carroll was new to me in the role, first taken by Jonathan Taylor, of the poor madman with the rattle. I cannot understand what an audience can find to laugh at in this section, which is infinitely pathetic and done by Mr. Carroll with absolute conviction—but then people used to go to have a giggle at the loonies in Bedlam; *plus ça change. . . .*

Henry Bright: St. Benet's Abbey

Bright in Norwich

by MARINA VAIZEY

The city of Norwich has a host of things to commend it to the visitor: a glowing cathedral, responsive to the intensive care being lavished on it; the first, and brilliantly successful, central pedestrian precincts; an old history and a newish university, with, incidentally, an outstanding department for the history of art; and an honourable tradition of genuinely progressive local government. The town makes very good beer, and very good shoes. The heart of Norwich is the precincts of God—and shopping—and the waterways—and the hill on which the Castle stands. The Castle has undergone a gentle conversion, which is still continuing, and is a local museum of national interest

In 1968, a sympathetic insertion of a central rotunda was made, from which corridors radiate, into the natural history section, where local flora and fauna are next to exotic varieties, replete with jungle noises; the riches of the local treasure troves, Roman antiquities and earlier; a small and growing collection of the arts in modern times; local porcelain and pottery; etc. The region had an unusually strong medieval culture, and objects expressing some of those heights will be on view this October in a major exhibition of East Anglian medieval sculpture. Certainly something about East Anglia makes for the feeling that a sense of place has always been strong.

Norwich has of course given her name to the first notable school of local landscape painters. Several rooms at the Castle Museum display with sensitivity a fine selection of watercolours, prints and drawings by the two outstanding masters of the Norwich School, John Crome and John Sell Cotman. With the passage of time, their work looks more remarkable rather than less: and although their work may be subtly different, both masters are obviously rooted in acute response to particular places. Their formidable gifts of pictorial organisation still make for pictures and images vivid, fresh and unexpected. Their delicate renderings of the atmospheres of landscape remains distinct and beautiful.

The Museum has just published its first substantial specialist catalogue for a number of years. It is devoted to the work of Henry Bright (1810-1878) described as one of the last of the Norwich School.

An exhibition of Bright's work can be seen at the Castle Museum until the end of September, a number of loans augmenting the museum's own substantial holdings of Bright's work. It is interesting to see his work firmly in Norwich context; he seems to have less in common with his distinguished precursors than with a host of contemporary mid-Victorian painters.

Bright became a fashionable teacher and spent much time in London. His paintings include genre scenes painted in collaboration with other artists. It is with landscape, particularly in drawings and watercolours, that he is most successful. On the evidence of this exhibition, Bright's handling of paint was often awkward, and the organisation of his compositions somewhat rigid. The result is often work which is pleasant, but with a slightly stiff and antiseptic charm. But the handling in certain paintings of rock formations, vegetation, an expansive and changing sky, with scudding clouds conveys with a disarming lack of pretention, an affectionate, shrewd and moving depiction of well observed landscape: there are such passages of genuine beauty in *North Beach, Great Yarmouth; Old Barn, Suffolk; Orford Castle . . .* and there is a large and beautifully accomplished and vivid, coloured chalk and pastel scene of mountains and sea, on loan.

The drawings are skilled, albeit often pedestrian: but there is a magnificent group of drawings and watercolours from the Colman collection, which show diverse scenes: an old barn in Kent, cottages, meadows, mountains, and there are other drawings of trees, roads, beach scenes, which capture with felicity a landscape detail, a moment of time, and sometimes things overtly dramatic, as in *Rocky Coast with Wrecks.*

The catalogue is a model of detailed and exhaustive information, clearly presented, on a minor figure, much of his time. The worth of all this is that not only has Bright's work provided us with much of interest to look at; but that the detective work lavished on his work and life sheds much light on the fascinating, complicated and often amusing events in the life of a successful artist of the day, from exhibiting leading members of "society" to draw, involvements in professional associations, and the like.

ew York's striking musicians

ursday afternoon, during at the New York State , an elderly man was o sign a petition urging w York City Opera a to end its strike and o work while a new con- as negotiated "I'm no eaker," he said "I am underdog." This is a d traditional point of nfortunately there are in which all concerned erdogs: labour, management and the general public. of America's current ns' disputes share this

nly, the City Opera a, hitherto contracted to weeks of opera at $300 and guaranteed 11 weeks (to be worked off operetta performances, like, if available), are g high on the hog. The ompany, which ran a of $1.6m. last year, is omparable, as a pluto- employer, to General At $8.95 a seat, the already finds opera one more expensive forms of nment

these "underdogs" can ason and equity on their Management wants to reduce the guarantee of 11 extra weeks, claiming that it is paying for services it cannot use; the orchestra wants it extended to include six additional players. The musicians, pointing to the cost-of-living index, want rises totalling $100 over the next three years; management, pointing to its deficit, has offered $20. The public, of course, wants opera.

On September 1, having played three performances and pocketed pay cheques for the next four, the orchestra went on strike. "No contract, no work." No warning, either, alienating opera-goers who found the theatre closed, and offending the sister unions (soloists, chorus and stage personnel), whose contracts also expired, but who have continued to rehearse while negotiating.

Since then, some bargaining moves have been made, but a proposal for binding arbitration, accepted by the company, was turned down on Thursday by the union (perhaps in recollection of labour secretary Goldberg's 1963 arbitration of a Metropolitan Opera dispute, which the players then felt to be "very unfair)." Nobody knows what happens next; two scheduled new productions have been cancelled (Delius's *A Village Romeo and Juliet* and Strauss's *Ariadne*), putting the Los Angeles tour in the spring season in jeopardy because of scheduling complications. Some of the company's singers sounded very discouraged at Thursday's rally, foreseeing the possible demise of the company.

This has been a depressing week on the American musical scene. Last Friday the Metropolitan Opera, in its worst financial straits since the great depression, announced that a planned new production of *Don Giovanni* would be dropped (the old Eugene Berman sets will be refurbished instead), and that next summer's opera concerts in the city parks were beyond its means. On Saturday, the Chicago Symphony's contract with its players was up; the musicians were willing to play while negotiating, but the Chicago Orchestral Association cancelled the opening concert—a lock-out, in short. Then, on Thursday evening, the New York Philharmonic's contract expired; as the writer, however, there is no strike, no lock-out, and perhaps some hope.

DAVID HAMILTON

Elizabeth Hall

The English Concert

by MAX LOPPERT

Maria Callas was not the only absent soprano to upset South Bank routine on Saturday night: indisposition also removed Sally Le Sage from The English Concert's first appearance of the season. This tore a gap in the middle of the programme which not even the timely substitution of a Vivaldi flute concerto could wholly cover.

But indisposition was not the only problem. "It is in solo or chamber music played in intimate surroundings," read the programme note by director-harpsichordist Trevor Pinnock, "that the fullest expressive subtleties of old instruments are most readily appreciated. Very true; why, then, give a concert in the Elizabeth Hall, the place in London least likely to promote an atmosphere of intimacy? To compound the handicaps of murk, fog and gloom naturally offered by the venue, the hall was only half filled. From my seat in row R, not far away from the players, the performance of the Bach E major Harpsichord Concerto (one string to a part, the harpsichord an elegant Dulcken) was distinguished only by confusion of sound, blur of counterpoint, smallness of impact.

Which was a pity, because The English Concert has revealed on an earlier occasion the attractive liveliness of its group style. Indeed, in works less marked by contrapuntal complexities—for example, in the delightful suite of dances by the Brescian composer Biagio Marini that began the second half—something of their already easy familiarity with the ways of old instruments, their intimate understanding of Baroque phrasing, began to come across. I enjoyed the agility of Stephen Preston's traverse flute in the Vivaldi concerto, *La Notte*, its *tremolandi* shudders sounding especially picturesque. In the Fifth Brandenburg Concerto, Mr. Pinnock threw off the first movement cadenza with brilliant aplomb. I look forward to encountering the group again—in a more congenial setting.

Art show to aid muscular dystrophy

An art exhibition and auction will be held at the Lygon Arms, Broadway, Worcestershire, on Sunday, September 30, at 6 p.m., in aid of the Muscular Dystrophy Group of Great Britain.

Some 100 works will be offered including oils, watercolours and etchings, and some limited editions of lithographs, signed arnd numbered, will also be on view, each with a certificate of authenticity. Artists to be shown include Picasso, Chagall, Miro, Rouault, Dali and some promising young artists.

Music at St. Bartholomew

"Now that place . . . was very foul, and like a marsh, and at all times it abounded with filth and muddy water."

To-day Smithfield may have exchanged the mud of that 12th-century description for the more insidious fog of the motor car engine. But it still presents one of London's grandest vistas; and St. Bartholomew-the-Great remains one of London's grandest churches.

Until September 29 the church is celebrating the 850th anniversary of its founding. Just cause for celebration (one could add another: that so far it has escaped the hounding and suffocation by steel, concrete and glass that is the present hideous fate of St. Botolph and St. Helen's in Bishopsgate).

This week's concerts include a medieval and Renaissance choral programme by the Pro Cantione Antiqua; Paul Patterson's Manson Ensemble in pieces joining instruments and electronics; the Aeolian Quartet; and the Schutz Choir. An attractive little festival, and one that deserves patronage (but take a cushion—St. Bartholomew's chairs are cruel on badly padded behinds).

Last Friday's opening concert presented the Steinitz Bach Players and the London Bach Society in a performance of the Mass in B Minor. Dr. Steinitz is no stranger to the church, as those who attended the annual Matthew Passion performances from 1952 to 1963 must recall. His choir sounds at ease and very well there, and it was the winning smoothness and devotion of their singing that provided the most enjoyable feature of the concert.

Dr. Steinitz drove them hard; indeed, the occasion was noteworthy mainly for the unrelenting, unbending pace at which the choruses were taken, with no quarter given to gently-shaped phrasing, the sudden and artful release of tension or easing of momentum.

In its way, it was exciting, but—because the music never seemed to "sing itself," while it was seen and heard to be handled with force — seldom inspiriting. The atmosphere of abrasave energy got into the trumpet trio, who brayed unpleasantly throughout the evening.

Arias gave greater pleasure because of their subtler, more flexible moulding by conductor and orchestra. The best of the soloists was the most familiar—Neil Jenkins who used his smoothly projected tenor with fluency, though not with any special character. The others sounded less confident. It was, in sum a performance that promised more than it gave.

MAX LOPPERT

'ORT: RUGBY UNION

[M]oseley celebrate centenary [w]ith 25-12 win over Fijians

PETER ROBBINS

Y CELEBRATE their this season, and have several outstanding For three years now has been coming in via a in which the donor a certain sum per win first 15 will subsidise centenary which include a dinner a match against the ns, a well-documented —and of course last 's game, in which they Fijians 25—12.

y have made great ince the '50s. They have ubhouse, capacious stand, and administration their traditions. More tly, their relations with al junior clubs have d immeasurably, so that ing aspirant does not ily gravitate to Coventry. Colts policy has paid off, ntly Moseley have been the most successful clubs thanks in the main re of players—notably Finlan and Doble.

[S]pindly

unately it rather looks gh they are in for a time in this, their most nt season. On Saturday's they are going to "up front" particularly heavy grounds. Although the Fijians at no time pack really dominate in ch.

ont row is pretty minute, present the second row on and Mason looks too to generate any real Indeed, the Fijians them back when they erred too.

How Smith is left out of the back row is a mystery, for his qualites in support play were sorely missed. With Moseley swinging the ball fairly regularly it needed Smith to keep the momentum going, particularly from some of Finlan's eccentric breaks.

In view of their forward problems, Moseley will have to rely heavily on either the quick counterattack or the well-planned movement, for which they have the ideal backs, controlled by Webster. On Saturday he showed all his talents, covering comprehensively and picking up at speed to create Moseley's first try.

The Fijians were rather erratic but more purposeful than last week. They lost their strong tackling centre, Rabulai, after 25 minutes, and then Narisia 10 minutes before time, but their greatest misfortune was to find Doble in top kicking form, with three penalty successes and two conversions, which underlined their own deficiency in this skill.

However, they played with dignity and fervour if with little continuity. Visei again was their best attacker, and he began their first try after only two minutes, coming into the line and quickly changing the direction of attack. Naucabalavu, Qaraniqi and Narisia all handled before Latilevu scored in the corner.

Doble kicked a penalty, but Fiji scored their second exotic try with six players involved from a line out before Rabulai scored. Doble, momentarily leaving his rear station, nearly scored in the corner, as did Milner, but a good Fijian defence kept them out.

Moseley — having frittered away several chances through dropping the ball—took a half-time lead with Doble kicking a penalty and Cooper scoring the try that Webster's lightning pick-up had started. Significantly, it was good back row support that helped make this try.

Long way

Shortly after the break Cooper scored a second try. Fiji, exhorted by the generous crowd to run, did so but could never sustain the initial impetus. Their support could in no way match their bravado, and Moseley put the issue well beyond doubt when they were awarded a penalty try for obstruction by Visei on Cooper.

This seemed rather harsh, as Cooper still had a long way to run to the line when impeded. Ratutina ended Fiji scoring by barging over from a five-yard penalty, and the visitors now began to play their best rugby.

To the obvious distaste of the crowd, Doble kicked his third penalty when to run would have been more complimentary to the guests. The Fijians behind the Press box were sad but philosophical, and when asked how they felt replied "Isa lei," which expressed in their own language their regret that the team had not done better. It was a sentiment probably shared by the vast majority.

Golf, Yachting and Equestrianism Page 9

SOCCER

A transplant might help 'ailing' West Ham

By TREVOR BAILEY

SOMEWHAT luckily, Leicester salvaged a point in the closing stages of a splendid match at Upton Park on Saturday to retain their unbeaten record.

Their forceful centre-forward Worthington eluded Lock and ran through to equalise, leaving West Ham still without a victory this season.

The Londoners played with a skill and purpose which made utter nonsense of their lowly position, and created more than enough chances to have won by at least two or three clear goals.

Dazzling

They would have done so if Shilton had not brought off eight dazzling saves, including three from Robson, which would have beaten most goalkeepers.

It was ironic that Shilton was directly responsible for the one occasion he was beaten. He intended a dead-ball chip out to a colleague, but it was intercepted and left an unmarked Robson to do the necessary.

Using a fluid 4-3-3 formation, Hammers employed Bobby Moore in the centre, and rather deeper than the remainder of the midfield trio, while the promising young Lock took over the England captain's accustomed position in the middle of the back four.

At first this created a certain amount of confusion — both players tended to try to head the same ball—but Moore soon settled down and proceeded to supply a series of felling passes, many of them first-time.

Some inevitably went astray, but in the main his service was excellent.

Throughout both halves West Ham did most of the attacking and repeatedly found ways through and around Leicester's defensive network, only to be thwarted by the inspired Shilton.

To their credit, Leicester never panicked under the pressure, keeping composed and continuing to play football, and, because they have rather more artistic ball players than normal in midfield and up front, created problems whenever a counter-attack was launched.

Near half-time they came close to equalising on four occasions. After the interval they survived another intense bombardment but were still prepared to play the ball out of defence and rely on craft, especially from Weller —now operating in closer liaison with Worthington—Sammels and Glover to achieve their objective.

As the steam and the inspiration of West Ham gradually departed Leicester were rewarded with that all-important equaliser.

I was impressed with Leicester when I saw them force a draw at Anfield in the closing stages of last season, and this year they look an attractive bet for one of the cups.

The League Championship is probably beyond their capabilities because their defence, particularly at fullback, is slightly suspect, depending over much on Shilton. They did, however, use an intelligent, incisive and clean brand of football.

What can be said about the enigmatic West Ham? On Saturday they could claim they were unlucky, but although they have almost invariably been entertaining they have failed to win any major honour since the mid-sixties, in spite of having some fine players.

This suggests that something is missing—heart, perhaps—because over the years good teams make their own luck, and certainly clubs with considerably less ability have achieved far more.

They played well against Leicester, and looked good, but certain doubts remain.

Their defence impresses moving forward, with Lampard causing confusion down the left flank, but it was a shade vulnerable under pressure. This is borne out by the number of goals already conceded.

Their front three lack height, and consequently balance. Tyler is a natural winger who crosses with precision, but, alas, neither Robson nor MacDougall are outstanding in the air.

Both would be more effective alongside a big man who could nod the ball down to them. At the moment they are usually waiting for the arrival either of Booking or Bonds, by which time it is likely to be too late.

Since the days when the Hammers were both successful and entertaining, all their captains and their kings have departed with the exception of emperor Moore, now given a role for which he was better suited six years earlier. This is rather similar in cricket to calling upon the finest No. 5 batsman in the country to open the innings.

Moore has given magnificent service to West Ham, but it must be rather soul-destroying to have been both captain and the outstanding performer in their halcyon era and then to have remained through a lengthy mundane period when no honours have been won.

He would not be human if this had not caused some of the incentives to depart. It is easy to understand the club's decision to retain their England captain, but Moore himself must surely have benefited as a player from a change of scenery.

LAWN TENNIS

Narrow win for the men of Lancashire

BY JOHN BARRETT

THE BRITISH outdoor season ended with a triumph for the men of Lancashire who, after a gap of 50 years, carried off their second inter-county Hard Court singles championship with a narrow victory against the holders, Surrey, in the final at Bournemouth yesterday.

The women's event, which unlike the men's includes three doubles matches, was won again by Middlesex—their 17th overall success—who were pressed hard by the West of Scotland in their 5-4 victory.

Lancashire survived perilously in the semi-final on Saturday when only four games divided them from a depleted Essex team who were without two nationally-ranked men, John Lloyd (8) and Stephen Warboys (9).

Again yesterday, the Surrey men, without John Paish (ranked 4) and Christopher Mottram, held them to six matches all, so their victory depended on a two-set advantage, 16 to 14.

In the top bracket, the Surrey leader, Ken Weatherley (ranked 10) now a part-time player, lost both his matches, while the Surrey No. 2, Michael Collins won twice—first against Stanley Matthews and then, commendably, against the national under-21 champion, Mark Farrell, who beat him last week-end in the final of the BP Shield under-21 tournament.

In the lower order, Alan Mills, now a teaching professional, after losing in straight sets to John Crump, made a valuable contribution to Lancashire's victory when he beat Donald Lillestone by a similar margin.

Middlesex, having disposed of the young Devon side 6—3 on Saturday, also owed much to one of their long-serving stalwarts yesterday.

Shirley Brasher, still ranked at No. 10 and playing for her county at No. 4, won her singles easily 6—2, 6—0 against Sheila Moodie. Then she partnered the new Wightman Cup player, Glynis Coles, to clinch her side's victory with a 6—2, 6—4 win against ex-Wightman Cup player Winnie Wooldridge (formerly Miss Shaw) and Ruth Allan, while the other Middlesex pairs both lost.

At a time when county loyalties are being strained by the fast-expanding professional game, it is good to see many former ranked players prepared to put back something into the game.

Elsewhere, the chief successes of the season have been gained by the young ladies. Our first victories in the Annie Soisbault Cup (under-21) and the Princess Sophia Cup (under-18) augur well for future Wightman Cup and Federation Cup teams, but these last events brought little cheer this year.

Only Virginia Wade of our more recent leading ladies is still competing internationally and she had one of her typical seasons of peaks and troughs.

The men have fared little better. After the pleasure of witnessing the WTC success of Roger Taylor who reached the singles play-offs in Dallas and Mark Cox who with Graham Stilwell got to the doubles finals in Montreal, came that ill-fated Davis Cup trip to Munich.

Businessman's Diary

Market Research in Estoril

ESOMAR, the European Society for Opinion and Marketing Research, will be holding its 26th seminar at Estoril, Portugal, from November 28 to December 1. The subject is From Market Research to Advertising Strategy and Vice-Versa and will consist mainly of case histories of the development of advertising for actual campaigns—which are usually difficult to obtain.

Among the companies and brands that will supply material are Oxo, Martini, Silvikrin, BOAC, Kodak and Trust Houses Forte, and members of the Cranfield School of Management will describe their studies in measuring advertising effectiveness which cover 40 brands. The papers have come from five countries and describe national and international campaigns.

British first in woodwork

The International Woodworking Industries Exhibition, the first to be held in this country, will be held at Olympia from December 4-8. The products of 230 companies will be on show and the exhibition is being supported by EUMABOIS, the European organisation of woodworking machinery suppliers.

There will be a large Continental contribution with Germany, Italy and France particularly well represented. The largest contributor, however, will be Wadkin, the British company which has three stands and is showing what it claims is revolutionary new equipment.

The Exhibition covers everything from machines for sawing planks to machines for making furniture and British visitors can obtain rail and hotel discounts by writing to the IWIE Travel Office, 11, Manchester Square, London, W.1.

Art galleries at Dusseldorf

The second International Art Fair will be held at Dusseldorf from September 29 to October 7. Among the exhibitors will be nine British modern art galleries who will be sponsored by the Fine Art and Antique Exports committee under the DTI-joint venture scheme.

In all, around 300 galleries from all over Europe, the U.S., and Australia will be taking part.

U.K. TRADE FAIRS AND EXHIBITIONS

Date	Title	Venue
Sept. 25—27	Electronic Instruments Exhibition	Esso Motor Hotel, Bristol
Sept. 25—28	Street Lighting Exbn. and Conference	Spa, Scarborough
Sept. 25—28	Intnl. Filtration and Separation Exhibition	Olympia
Sept. 25—28	Dust Control and Air-Cleaning Exhibition	Olympia
Sept. 30—Oct. 3	Footwear for Spring Exhibition	Mount Royal Hotel, W.1
Oct. 2—4	Menswear Exhibition and Convention	Exhibition Centre, Harrogate
Oct. 2—11	Business Efficiency Exhibition	Olympia
Oct. 3—5	Midlands Ind. and Commercial Exhibition	Grand Hotel, Birmingham
Oct. 3—20	Modern Homes Exhibition	Kelvin Hall, Glasgow
Oct. 8—12	Screen Printing and P O S Exhibition	Olympia
Oct. 9—11	Housing and Town Planning Exhibition	Spa, Scarborough
Oct. 15—17	Homes Overseas Exhibition	Midland Hotel, Manchester
Oct. 15—20	Kensington Antiques Fair	Kensington Town Hall, W.8
Oct. 17—18	Engineering Products and Services Exhibition	Watford Town Hall
Oct. 17—20	Antiques Fair	Cutlers Hall, Sheffield
Oct. 17—27	International Motor Show	Earls Court
Oct. 18—20	Management Services Exbn. and Conference	Exhibition Hall, Harrogate
Oct. 21—25	Domestic and Com. Textiles Exhibition	Olympia
Oct. 22—25	Engineering Inspection and Control Exhibition	Horticultural Halls, S.W.1
Oct. 22—28	International Audio Fair	Olympia
Oct. 23—25	Highland Trade Fair	Aviemore Centre
Oct. 23—26	Food and Allied Industries Exhibition	Olympia

OVERSEAS TRADE FAIRS AND EXHIBITIONS

Current	Intnl. Machine Tool Exhibition (cl. Sept. 27)	Hanover
Current	Welding and Cutting Exhibition (cl. Sept. 27)	Essen
Current	Intnl. Data Processing and Office Org. (cl. Sept. 28)	Paris
Current	Intnl. Exhn. of Foods and Provisions (cl. Sept. 27)	Cologne
Current	International Furniture Fair (cl. Sept. 27)	Milan
Current	International Consumer Goods Fair (cl. Sept. 30)	Poznan
Sept. 28—Oct. 3	Videocassette Conference and Exhibition	Cannes
Oct. 1—5	Food Processing, Packaging and Distribution	Johannesburg
Oct. 1—7	Electronics Exhibition	Osaka, Japan
Oct. 3—8	Factory Safety and Hygiene Exhibition	Dusseldorf
Oct. 3—7	Storage, Handling, Distribution Exhibition	Padua, Italy
Oct. 4—14	Motor, Cycle and Sport Exhibition	Paris
Oct. 5—11	International Aerospace Show	Iruma, Japan
Oct. 8—13	British Marine Equipment Exhibition	Tokyo
Oct. 8—14	Food Processing Machinery Exhibition	Milan
Oct. 9—11	Hardware and Household Goods Exhibition	Dublin
Oct. 11—22	Hotel Equipment Exhibition	Paris
Oct. 11—17	International Packaging Exhibition	Gothenburg
Oct. 12—21	International Food Fair	Copenhagen
Oct. 13—15	Souvenirs and Advertising Gifts Exhibition	Salzburg
Oct. 14—21	Trade and Tourism Equipment Exhibition	Milan
Oct. 19—25	British Industrial Technology Exhibition	Bilbao
Oct. 20—25	Women's Ready-to-Wear Exhibition	Paris
Oct. 22—25	Pollution Engineering Exhibition	Philadelphia
Oct. 25—28	Wood and Allied Products Exhibition	Rotterdam

BUSINESS AND MANAGEMENT CONFERENCES

To-day	HTS Mngmt.: Occupational Testing (cl. Sept. 27)	High Wycombe
Sept. 25—26	Financial Times: Agreements between Companies in the EEC	Hilton Hotel, W.1
Sept. 25—27	Urwick Management: Finance in Construction	Slough, Bucks.
Sept. 27	Management Games Seminar	Coburg Hotel, W.2
Oct. 1—2	Contractors' Plant Association: Plant Hire	Grosvenor House, W.1
Oct. 2—3	Assoc. Business Programmes: Marketing Seminar	Kensington Close Hotel, W.8
Oct. 3—4	London Chamber of Commerce: Offshore Oil	Grosvenor House, W.1
Oct. 4	Fleeman Conferences: Going Public	Strathallan Htl., Birmingham
Oct. 8—12	Dunchurch College: Management Skills	Dunchurch, Rugby
Oct. 9—10	Financial Times: European Motor Industry	Royal Lancaster Hotel, W.2
Oct. 10—12	Marketing Improvements: Managing a Sales Force	Portman Hotel, W.1
Oct. 11—Dec. 13	Fin. Times and City University: FT-City Course	City University, E.C.2
Oct. 15—19	Computer Power: Systems Management	Cannock, Staffs.
Oct. 15—26	Mitchell Partners: Method Study	Beeston, Notts.
Oct. 16	Ldn. Chmbr. of Comrc.: Angola and Mozambique	69, Cannon Street, E.C.4
Oct. 16—17	Marketing Improvements: Practical Pricing	Portman Hotel, W.1
Oct. 16—17	Fin. Times and Professional Administration: Managing the Company's Money	Royal Lancaster Hotel, W.2
Oct. 16—19	Computer Power: Decision Tables	Cannock, Staffs.
Oct. 18	James Morrell: Forecasts for EEC '73-'78	Carlton Tower Hotel, S.W.1
Oct. 18	Bus. and Ind. Training: Cost of Noise	Cafe Royal, W.1
Oct. 22—23	BACIE: Training for Fault Diagnosis	16, Park Crescent, W.1
Oct. 22—26	Brunel University: Organisation Analysis	Uxbridge, Middlesex
Oct. 25—26	Brit. Inst. of Management: Art of Selling	Hilton Hotel, W.1

Merseyside aid call renewed

Financial Times Reporter

A SECOND attempt to persuade the Government to upgrade Merseyside from a development area to a special development area is to be made by the North-West Industrial Development Association.

The association will press Mr. Peter Walker, Secretary for Trade and Industry, and Mr. Christopher Chataway, Minister for Industrial Development, to reconsider their refusal of a similar request in March, in view of Merseyside's serious unemployment problems and other economic difficulties.

Special emphasis will be placed on Mr. Chataway's recent statement that the Industry Act, 1972, was now playing a big part in stimulating investment in the regions but progress had been slower than hoped on Merseyside.

Workless rate

"Merseyside's unemployment rate of 5.9 per cent. is more than twice the national average and has fallen much more slowly during the recent economic recovery than in the country as a whole," the association says.

The association is also to express its serious concern about adverse effects which it says the recent cuts in public expenditure wil have on major road projects in the North-West.

It claims that the Government has paid insufficient attention in making cuts in public expenditure to their implications for regional development, and says the North-West and other assisted areas should be given priority in public spending.

Sea authority urged for NW Europe

By James McDonald, Shipping Correspondent

THE COUNTRIES of North-West Europe should set up a regional authority for their seas, responsible for fishery administration, conservation, pollution control and the regulation of shipping and the oil industry, says a Fabian Society study, The Law of the Sea, published to-day.

The British Government should take this initiative in negotiations for the United Nations' Law of the Sea Conference in May and June next year, say the authors of the study, Elizabeth Young and Brian Johnson.

Current British policy, they claim, fails to recognise the need for "sea-use" planning and exploiting the seabed.

"We are maintaining the claims of our distant water fishermen to catch cod off Iceland while neglecting the interests of our inshore fishermen who face ruin from overfishing by other nations."

An equitable and properly enforced regime for the seas of North-West Europe, says the study, could provide a useful building block for the international regime that the UN conference will be concerned with setting up.

The Law of the Sea—Fabian Research series No. 313, 50p.

See Justinian

THE WEEK IN THE COURTS

Britain's stand on territorial waters again under challenge

BY JUSTINIAN

FIFTEEN YEARS ago the Icelandic Government passed a decree extending its fishing rights to 12 miles. The ensuing UN conference on the Law of the Sea at Geneva failed to agree on the width of a State's territorial waters. History is now repeating itself. Iceland has declared a 50-mile limit, and the nations of the world are due to forgather next year at Santiago to thrash out the future of the wet five-sevenths of the earth's surface. Are they any closer to an agreed international rule of law?

At a time when the concept of the freedom of the high seas is under challenge by nations that conceive their national interests vitally affected, a pamphlet in the Fabian research series out to-day advocates the adoption by the British Government of a planned international use of the seas. In place of anarchy, the authors, Elizabeth Young and Brian Johnson, call in *Law of the Sea* (Fabian Research Series 313, 50p) for the extension of functional zones of national or regional responsibility beyond the 12 miles limit which the British Government at present considers an absolute limit for individual nations.

The British Government's adherence to the laissez-faire policy which leaves vast areas of the seas to be fished by all comers has never been better expressed than in its application to the International Court of Justice against Iceland. It asks the Court to declare that there is no foundation in international law for the claim of Iceland to be entitled to extend its fisheries jurisdiction by establishing a zone of exclusive fisheries jurisdiction extending to 50 nautical miles.

Unilateral

The application goes on to ask for a declaration that the conservation of fish stocks in the waters around Iceland is not susceptible in international law to regulation by Iceland's unilateral extension of its exclusive fisheries jurisdiction to 50 nautical miles. Thus, in one breath, the British Government is asserting the traditional principle of international law, which severely limits a State's territorial waters, while acknowledging the need for international action to conserve the world's fishing resources. Since the right to fish cannot be dissociated from the need to prevent the plundering of fish stock outside territorial waters, traditional international law may have to give way to a new international order for the seas.

Both the first UN conference in The Hague in 1930 and the second at Geneva in 1958 produced deadlock on the issue of territorial waters. This was because the major maritime nations proceeded on the false assumption that their political, military and fishing interests coincided with those of other developed (and ultimately developing) countries. In fact, the rest of the international community did not so readily accept this view.

Twice deadlocked, the nations who will go to Chile next year may find a solution only in the overthrow of established international law. In the interim, the International Court of Justice may point the way forward when it comes to deliberate on the Anglo-Icelandic dispute.

Insecure

Is the limited territorial waters principle so clearly in the interests of the international community that Britain is right to cling so fondly to it? The fixing of the three-mile limit represented a hard-fought battle which was won in the 17th century by the British who were intent on keeping the seas open to her merchant fleets. But three miles was never sacrosanct. Indeed, the International Court of Justice, in the Anglo-Norwegian Fisheries case in 1951, confirmed Britain's own acceptance that four miles in the case of Norway was an exceptional historical demarcation of her territorial waters.

At the same time, the Court expressly disavowed the view that, following the failure of the 1930 conference, States were free to determine for themselves the extent of their territorial waters. But the matter has never been finally settled by the international lawyers. The three-mile limit was patently insecure in 1930, and future events have proved its insecurity. Inevitably, smaller States who felt that the larger maritime nations would continue to deprive them of their food and revenue clamoured, and obtained up to 12 miles as the limit.

A British attempt at delimiting any expansive move to 12 miles was lost at the 1930 conference. Then, at a 42-nation meeting, when Britain had a more powerful voice at the ference table, her failure yield on the contiguous which allowed an area up miles from shore in ques only of customs revenue quarantine, was a blunder. golden opportunity was lo establish definitively the ru international law.

In 1958 a compromise six-mile territorial sea, wit exception that this exte would not affect existing r of passage for vessels outsid three-mile limit, was bi opposed by Canada and the Asian group. Amid an out of nationalism, frustration futility set in and the confe tailed off, engulfed in dea Since then, the world has m further away from the B position without finally co to either a political or solution. The outcrop of incidents in the North Se tween Iceland and Britain only accentuated the nec a speedy international sol

More than fisheries involved in any extension o territorial waters. An exte to 12 miles, let alone t might deprive of their cha as high seas such impo maritime links as the Stra Gibraltar, the Gulf of Aqa the Bab-el-Mandeb at southern end of the Red The Straits of Malacca ha cently been "territorialise Malaysia and Indonesia. An English Channel would cre problem, although the go for the Channel will neces an accord between Britain France.

Compromise

While States still have right of innocent passag their merchantmen throug coast waters, closure of pa the high seas can only giv to international incidents. are, moreover, other proble oil- and gas-raising, dre dumping, and the testir nuclear bombs. All these ties compete in a disorderl potentially disastrous way. miraculous that there hav been more *Torrey Canyon*

Perhaps all this argues compromise between the tional and modern views. may still be a need for a l territorial waters for, say, six miles. If so, the ne establish an international for the high seas seems more imperative.

HUMBER PORTS TRAFFIC

Inward traffic through the Humber ports for the four weeks ended August 26 totalled 1.942m. tonnes and outward traffic 820,083 tonnes, the British Transport Docks Board says.

Comparison with the corresponding period a year ago, however, would be invalid as during that period there was a total strike by registered dock workers. For the aggregate 34 weeks of this year, inward traffic totalled 14.199m. tonnes, and outward traffic was 8.232m. tonnes.

THE DIAMOND STYLUS COMPANY LIMITED

SUMMARY OF RESULTS:—	1973	1972
TURNOVER	730,120	572,017
PROFIT BEFORE TAXATION	123,453	80,245
TAXATION	42,300	34,000
	81,153	46,245
DIVIDENDS, INCLUDING ACT ON FINAL DIVIDEND	20,316	17,454
PROFIT RETAINED FOR YEAR	60,837	28,791
EARNINGS PER SHARE	4.0 pence	2.3 pence

The Annual General Meeting was held on Friday 21st September 1973 at Colwyn Bay, N. Wales.

Extracts from the statement by E. S. Coathup, MBE (Chairman):

"I am pleased to inform you of the Group's pretax profit of £123,453, a record for the Company and achieved in spite of considerable increases in costs and the necessity for maintaining price levels in order to retain competitive.

Next year is again expected to produce improved profits, and we are pleased to report full order books, technical progress, and a balance sheet very much healthier than in the past."

OVERSEAS NEWS

Chile recognition 'fully justified' says Sir Alec

Y HUGH O'SHAUGHNESSY, LATIN AMERICA CORRESPONDENT

DECISION by the British rnment to recognise the regime in Chile is "abso- y justified," Sir Alec ;las Home, Foreign Secre- said yesterday.

Alec, speaking at Heathrow ort before leaving for New where he is to attend the ed Nations General nbly, said: "We have very interests in Chile, so there 'ery strong practical reasons 'ecognising the new Govern- . British subjects in Chile already in full agreement our action."

wever, Sir Alec said that icceptance of the new junta not neccessarily an agree- with its policies. "That is part of the procedure and is stage we do not even what their policies are."

anwhile the junta has been ing up its campaign against oreign Press.

Financial Times corres- ent in Santiago, Mr. Dwight r. who also writes for the magazine Newsweek and the business publishing house aw-Hill is one of the latest s. His house was searched his English-born wife and ear-old son intimidated last

Last week also, the ington Post representative, Marlise Simons together with M. Dupuy of the Paris daily Le Figaro were detained. This followed the detention shortly after the coup of Sr. Hugo Infantino and Mr. Stewart Russell of Reuter and the searching of the premises of the U.S. news agency United Press International.

Mr. Van der Putten of the Dutch daily Nieuwe Rotterdamsche Courant has sought the assistance of the Netherlands embassy in Santiago following military action against him.

In London this weekend it was revealed that Britain earlier this year ignored a Chilean appeal for British assistance to smooth over its relations with the U.S. Speaking on Saturday Mrs. Judith Hart, shadow minister for overseas development said that she had passed on to Sir Alec Douglas-Home a request from the Chilean Foreign Minister Sr. Clodomiro Almeyda for British assistance. Relations between Santiago and Washington were extremely frigid after the Chilean decision in 1971, voted by all parties in the Chilean congress, to take over the U.S. copper companies operating in Chile, and the subsequent U.S. decision to retaliate by blocking international loans to Chile.

A Foreign Office spokesman on Saturday said that first investigations showed the appeal was limited to a request for British aid in negotiations with the U.S. in the "Paris Club." This is the group of developed countries to whom Chile is in debt and whose decisions were crucial to the Allende Government's foreign exchange policy.

The spokesman said that the Office regarded the negotiations as "technical and not political" and therefore the question of British good offices did not arise.

Reuter adds from Santiago: The military junta has embarked on a campaign to win the confidence and support of peasants, workers and middle class, promising them land and participation in industries.

In a decree issued yesterday, the junta said it would hand over all ownership of legally expropriated land to peasants. The commander of the Chilean air force, General Gustavo Leigh, also promised workers a share in the profits of their industries.

Meanwhile, 7,000 people suspected of militant leftwing activity are being held in Santiago's soccer stadium. The death toll in last week's fighting has now been officially increased to 244. The junta has repeatedly denied reports that thousands died.

Argentine kidnappers set ransom demand

BUENOS AIRES, Sept. 23.

ARMED Argentine kidnappers who seized a young British accountant are demanding a ransom of between $500,000 and $800,000 for his safe release, informed sources said here to-night.

The accountant, Mr. David George Heywood, 37, was snatched from outside his suburban home here last Friday by six armed men who overpowered his bodyguards, police sources reported.

Mr. Heywood, who works for an Argentine subsidiary of British American Tobacco, hired two bodyguards after receiving anonymous telephone threats to his life. But the kidnappers—two armed with submachine guns—seized the bodyguards and knocked one of them out before fleeing with their captive.

Mr. Heywood was the fourth British executive kidnapped in Argentina in a year. News of his kidnapping came as Argentines were voting in Presidential elections, which General Juan Perón is widely expected to win. General Perón has pledged to halt the wave of violence and kidnappings, often attributed to Left-wing urban guerillas.

Mr. Heywood, married with two children, has been working with the Nobleza tobacco company here since last November when he arrived in Argentina.

It was also revealed to-day that Herr Eberhard Quentin, a 43-year-old official of the West German embassy in Argentina, has been found shot dead beside a road on the fringe of Buenos Aires. He had six bullet wounds.

Herr Quentin was assigned here less than a year ago. His body was found on Friday night and the case was still under investigation to-day.
Reuter

Hussein offer to Palestinians

IHSAN HIJAZI

BEIRUT, Sept. 23.

HUSSEIN said to-day n's gates are open to Pales- is if they agree to inte- within the Jordanian unity, but that no one ig to threaten the country's and security will be ted.

monarch, in an interview the leading Lebanese Al Nahar, was replying to stion on whether he was to readmit the Palestinian las to Jordan.

his first public statements he issued an amnesty for ando prisoners and since conciliation with Syria and , the 37-year-old King de- to comment on the next in the reconciliation or his future relationship the guerillas. He appeared gest that Palestinians will- return to Jordan can do their personal capacity than as members of la organisations.

Hussein said talking of plans about inter-Arab pments is premature. He ied that additional steps Arab reconciliation will w, so that we may be cer- of the outcome. He ned: "The idea is not to on emotions but to lay the Arab cause on strong ations."

Hussein furthermore d to commit himself on uestion of allowing Arab and units of the Palestine tion Army to be stationed rdanian soil.

rvers believe the King is g the door open for some of reconciliation with the as provided Jordan will he upper hand.

statements coincide with of moderation in the commando position. The Palestine Liberation Organisation (PLO), in a statement last night, set three conditions for its endorsement of reconciliation with Amman and for reactivation of the eastern front in Jordan against Israel. They were: readmission of the commandos to Jordan, freedom for the Palestinians to operate from there, and allowing Syrian and Iraqi troops to be stationed on Jordan's cease-fire lines with Israel.

● A meeting on Saturday between Egypt's President Anwar Sadat and Mr. David Rockefeller, President of the Chase Manhattan Bank, has touched off speculation here that the U.S. Government may be embarking on a new Middle East peace initiative.

Mr. Rockefeller who arrived here on Friday on his way to the International Monetary Fund meeting in Nairobi met President Sadat privately on Saturday, and also conferred to-day with a number of Egyptian political leaders.

Reuter adds: The Lebanese daily newspaper Al-Hayat to-day said Syria would soon conclude a big arms deal with Britain and France under a plan to develop its armed forces in the face of Israeli raids. The newspaper gave no source for its report but said the deal included modern aeroplanes, tanks and artillery.

More believed held after Kabul coup plot

BY DAVID HOUSEGO

TEHRAN, Sept. 23.

A CONSIDERABLY larger number of senior officers are said to have been arrested in Afghanistan as a result of the uncovery of an attempted plot to overthrow the new régime of President Sardar Mohammed Daud than has been disclosed by Kabul Radio, according to reports here.

Radio Kabul, in a broadcast on Thursday which made allegations of Pakistani involvement in the plot, named three people who had been arrested. They were Mr. Maimandwal, a former Prime Minister, Gen. Razzak, a former Chief-of-Staff in the air force, and Gen. Khan Mohammed, once Governor of the province of Nanghahar.

Among other officers to have been arrested is Gen. Abdul Salem, a former Chief-of-Staff in the army, and a brother-in-law of Mr. Maimandwal.

The abortive coup emphasises the continuing discontent and divisions that exist within the country. Since both Gen. Razzak and Gen. Khan Mohammed were both close friends of President Daud, their arrest can be said to mark a shift of power in favour of the younger Russian-trained officers.

Pakistan has meanwhile rejected the charges that it was involved in the conspiracy in Afghanistan.

andt flies U.S. for ek's visit

onathan Carr

BONN, Sept. 23.

CELLOR Willy Brandt the U.S. today for a week- visit during which he is expected to meet with ent Nixon.

main scheduled engage- or Herr Brandt's U.S. visit reviously been his speech dnesday before the United s General Assembly. Both nd West Germany became members last week and Walter Scheel, the West n Foreign Minister, is in New York. But it is nderstood that the Chan- will also have talks with resident—although it has t been announced exactly and where.

ain subject in the discus- s likely to be Mr. Nixon's vaited visit to Europe, dowed earlier this year in enry Kissinger's speech a new Atlantic Charter. ommon Market countries eached a wide measure of ient on establishment of gue with the U.S. But the of Mr. Nixon's trip is in doubt, largely because current domestic prob-

'Ex-General must stay in Soviet mental hospital'

MOSCOW, Sept. 23.

A SOVIET Court has ordered continued psychiatric treatment for former Major-General Pyotr Grigorenko, informed sources said here to-day.

On Thursday, it was reported that Grigorenko had been transferred to a general hospital south-east of Moscow, but sources said to-day the hospital was an ordinary mental institution at Stolbovaya, 60 kilometres from the capital.

Grigorenko, 66, was dismissed from the Soviet Army in 1964 after taking part in dissident activities and was arrested in Tashkent in 1969. The following February he was declared insane and transferred to a prison psychiatric hospital in Chernyakhovsk in the Kaliningrad district near the Polish border.

Grigorenko, best-known for his fight to regain Crimean Tartars—exiled for alleged collaboration with the Nazis in World War II—the right to return to their homeland, was charged with anti-Soviet activities but never brought to trial.

Since then he has been mostly confined to a single cell at the Chernyakhovsk hospital and allowed only one hour's exercise a day, except for the past two months when this was increased to four hours daily, the sources added.

He had not been treated with mind-dulling drugs as had been feared, but was now blind in one eye and had lost much of the sight of the other, they said.

The sources said a psychiatric commission which examined Grigorenko's case ruled that he did not need treatment but the Kaliningrad City Court overruled this decision. However, the court said Grigorenko could be moved to Moscow to be near his wife, but a State attorney protested, prompting the compromise formula of sending him to Stolbovaya, they added.

● Soviet police to-day arrested a Latvian Jew protesting against the Government's denial of an exit visa and detained for 90 minutes an American correspondent covering the demonstration.

The newsman, Roger Leddington of the Associated Press, was released only after police had forcibly confiscated his film of the Jew, Arkady A. Shpilberg, displaying a sign reading "Let me go to my family in Israel."
Reuter, UPI

Laird warns of oil rationing

WASHINGTON, Sept. 23.

MR. MELVIN LAIRD, President Nixon's home affairs adviser, told Americans to-day they will probably face oil rationing this winter—possibly in the next few weeks.

Speaking in a television talk show, Mr. Laird assured viewers there would be no tax increase this year. But he said there might not even be time for the Administration to co-operate with Congress, as it would like to do to devise an oil rationing scheme.

Asked if such a plan would be carried out in the next few weeks, he replied, "I think it will have to be implemented."
Reuter

Election run-up problems for the Liberals

BY RICHARD EVANS, LOBBY CORRESPONDENT

THE LIBERALS ended their highly-successful assembly at Southport in a mood of rare euphoria, but facing more problems in the run-up to the next General Election than they cared to admit.

The optimism generated by the four remarkable by-election victories, and the solid local government successes earlier this year has apparently convinced many party members, and even some MPs, that the Liberals face a genuine prospect of snatching power from the Conservatives at the next election and taking over from Labour as the radical alternative.

The goal

They believe the party should go all out for power and accept nothing less as their goal. They face the very real danger, however, that a set-back at a by-election—for instance, Hove—could severely damage morale and lead to unnecessary recriminations.

Others, more realistically believe that if the party gains many more seats at the next election it could be faced with the prospect of holding the balance of power, and should consider how to react to this situation.

This fundamental difference of attitude, glossed over although evident throughout the week, surfaced during the final debate on Saturday when party strategy was discussed.

Mr. John Pardoe, MP for North Cornwall, called on the party to consider the implications if it held the balance of power. He was passionately opposed by Mr. Cyril Smith, MP for Rochdale, who argued that the party should campaign for all-out victory at the election.

After a lively debate, delegates split down the middle and accepted Mr. Pardoe's amendment by 338 votes to 328.

The tone of the debate and the aggressive quest for power promised by Mr. Trevor Jones, the former party president, ensure that the issue will be kept very much alive in the coming months.

Mr. Jeremy Thorpe, party leader, managed to keep aloof from the argument, confining himself to a call to all party workers for a sustained and dedicated effort from now until the General Election.

"Can we translate the good will, the enthusiasm and the support which have been shown for this party in recent months into solid Parliamentary results?" he pleaded.

The answer depended on the commitment of individual Liberals throughout the country in the coming 12 months.

The test of the assembly had been whether it had projected sensible policies to the nation and had shown the party had men and women both competent and humane, ready to give service to their fellow countrymen.

Dual task

"I believe we have discharged that dual task. We have outlined our strategy to contain inflation with a prices and incomes policy that is both fair and capable of acceptance by all," Mr Thorpe declared.

It was a rousing speech from a party leader who had managed to project himself to his followers as a man of a Prime Ministerial calibre. They loved it and left the conference in greater heart than for many years.

Call for new door-to-door sales laws

BY OUR OWN CORRESPONDENT

NEW LAWS are needed to protect the housewife from the sharp practices of fast-moving teams of door-to-door salesmen, a spokesman for the Consumer Association said yesterday.

Because it is possible to move in and out of towns quickly, cheating customers and over-charging for goods and services the housewife, in particular, is vulnerable. Companies are also concerned about the damage being done to their reputations when the teams pass themselves off as their representatives.

One solution being considered by the Association is a form of licensing which would require salesmen to apply in every town they want to operate for a certain length of time.

"This would require details such as the company's address and its assets," the Consumer Association stated yesterday. "When such salesmen leave the area they can still be chased if they don't give satisfaction.

"The other trouble is that as soon as legislation catches up, as in the case of pyramid selling and with unsolicited goods, the ingenuity of these characters comes up with something else."

Appliances

The Consumer Association is particularly worried about sales of washing machines and cleaners and the number of times housewives get a bad deal when buying food freezers from casual callers. "The salesmen often sell a freezer-food plan, a package deal where the machine and the food to go in it are supplied by the same company. The freezer is often far more expensive than in a shop and the food not of a very good quality. The housewife might sign a long-term contract for such a food plan, say six months.

"The trouble is that the door-step is always a one-to-one situation, and people get flustered. In a shop you can always walk out, but you cannot leave your home to get away from a persistent salesman."

Problems in marine insurance

By Our Own Correspondent

VENICE, Sept. 23

FIERCE COMPETITION between marine insurance markets will be uppermost in the minds of the several hundred delegates and accredited underwriters who are here for this week's annual conference of the International Union of Marine Insurance.

London, still the world's leading insurance market, is under intense pressure from overseas competitors particularly from the U.S. where some of the giant life companies are using their reserves to swell that market's capacity for writing marine and aviation business.

Other markets too, are claiming business. Japan, for example has recently entered the international market, and five of the major Japanese insurance companies have opened offices in London. They have been granted associate membership of the Institute of London Underwriters together with nine other overseas companies.

Although much of the business London might lose finds its way back through reinsurance, underwriters fear the long term effects on the whole market if the slide in premium rates is not arrested.

Underwriting accounts can quickly take a hammering if rates do not provide for the accumulation of adequate reserves to meet the inevitable catastrophes.

With the entry into service of bigger and bigger ships, increasing catastrophe exposure goes hand-in-hand with a reduced spread of risk.

Another serious problem is inflation. With booming freight rates and full order books for shipyards, ship repairers are calling the tune on prices. Mr W. J. Claydon, chairman of the Institute of London Underwriters, said last week that repair costs are accelerating at a rate faster than has been known before.

He leads a party of 45 underwriters from the company market in the U.K. With the Lloyd's delegation of 15, it is the largest party the British market has sent to one of these conferences.

Between to-day and Friday, many subsidiary problems will be debated, including cargo insurance, containers, pollution risks, nuclear insurance, and casualty experience.

INTERNATIONAL INDUSTRY REPORT

Steel demand exceeds output

BY OUR INDUSTRIAL AND FOREIGN STAFF

WORLD STEEL producers expect the current boom to continue at least until the second quarter of next year. Shortages are being experienced in almost all the main markets, although manufacturers have raised production substantially so far this year.

Producers in the U.K., France, West Germany, Italy, the U.S. and Japan all expect a worthwhile increase in ouput over the whole of 1973, despite difficulties in some countries—notably Italy and to a lesser extent the U.K.—with industrial disputes.

With the market very strong, prices remain firm and there are indications that further increases will be made in several countries in the autumn.

Because of the strength of demand exports between countries have tended to slacken, and where overseas supplies have been made available premium prices have been asked and obtained.

Deliveries

U.K. steel production in the first eight months of this year totalled 17,707,000 tonnes (metric tons), 9.8 per cent. more than in the comparable period of 1972.

The indications are that the industry as a whole, both private and public sector manufacturers, will produce a total of at least 23m tonnes this year, 1m tonnes more than in 1972. This will not meet demand however.

Hopefully, the nationalised British Steel Corporation, the bulk steel supplier, will increase home deliveries by about 11 per cent. this year, having reduced exports as far as possible. It would have done even better, but strikes in its general steel and strip mills divisions led to losses of 500,000 tonnes and 250,000 tonnes of steel respectively at the start of the year.

Both of these divisions are rationing supplies at the moment, and this situation is expected to continue into next year. Reinforcement steel used in the construction industry is in very short supply, and delivery times are extended.

BSC has made the point that reinforcement steel has been imported on a substantial scale in previous years (to the point where 40 per cent. of tonnage delivered in the U.K. in the first half of 1972 was imported, because it was then cheaper). Now that British steel is cheaper and premium prices are charged for imports, some users have tried to switch back to BSC, but without success.

Among other products in short supply are sheet piling and such construction steel as beams and girders. The commissioning of a new medium section will at BSC's Anchor works should help the position in the latter market, but possibly not before next year.

The shipbuilding industry's supplies of steel, contracted forward, are reasonably secure, and there have been no major difficulties in the process plant field.

Confident

Restrictions on supplies to the domestic appliance industry are expected to continue at least until the end of the year, however.

French steel production this year is expected to rise significantly above last year's level. France's steel producers' association (Chambre Syndicale de la Siderurgie Francaise) is confidently forecasting a 25.5m.-26m. tonnes output for the year, against the 1972 level of 24m. tonnes of crude steel (ingots).

At the same time, the industry has been able to keep price increases at a slightly lower level than those of its main European competitors. French steel is still selling at about 10 per cent. less than Belgian and West German steel.

The market for steel is described as still "very firm," partly as a result of renewed demand from the Soviet Union and strongly increased buying by Japanese customers. For 1974, though, France expects to see a levelling off in demand.

The latest steel production figures are for August, which is a notoriously slack month, but they nevertheless show an increase on the same 1972 period. Crude steel output rose 6.6 per cent. to 1.698m. tonnes; bringing production for the first eight months to 16.456m. tonnes, or 5.5 per cent. more than the first eight months of 1972. Pig-iron output was up by 5.9 per cent. to 13.129m. tonnes in the same period.

Crude steel production in West Germany averaged 4.08m. tonnes in the first eight months of this year, almost 12 per cent. above last year's level. This bears out the confident forecast by the steel producers of an all-time record of around 48m. tonnes being achieved this year.

In 1972 the industry produced 43.7m. tonnes of crude steel, compared with the peak of 45.3m. tonnes in 1969.

Optimistic

Of the total production, exports were averaging 731,000 tonnes a month in the first eight months this year, also a 12 per cent. rise. Imports averaged 641,000 tonnes in the first seven months of this year.

Although the industry is on the whole optimistic about maintaining its sales at least this year, it views the medium-term future with apprehension. Main reasons are the exchange rate changes benefiting some of the important competitors, such as the U.S., Britain, Japan and Italy, and the price it has to pay for coking coal. The difference between the West German and world price of coking coal is only partly covered by Government subsidy.

One effect of the currency changes is a steep rise in comparative wage costs. A recent survey carried out by the West German Iron and Steel Federation showed that steel wage costs in Italy were only half those in West Germany: those of France were 70 per cent., and of Britain 60 per cent. Even in the U.S. wage costs were below the West German average.

Italian pig-iron output rose marginally over the first eight months to 6.28m. tonnes from 6.24m., a 0.6 per cent. advance, as did steel output, which rose 0.2 per cent. to 13.07m. tonnes, from 13.04m.

In the first half of the year steel exports dropped to 2.21m. tonnes from 2.39m. tonnes, while imports rose to 3.22m. tonnes, from 2.87m. tonnes. This reflects the stockbuilding and higher consumption resulting from the new-found recovery in industrial production (up 6.1 per cent. on average over the first seven months, and 15 per cent. in July alone).

Japanese steel production has risen rapidly since last year, and the steel industry is now working at full capacity. Production during the first eight months of the year amounted to 77.9[illegible] tonnes, compared with the 61.7[illegible] tonnes produced during the January to August period of 197[illegible] when the Japanese economy was still in recession.

Steel exports have also ris[illegible] fast. Shipments during the fi[illegible] half of the year amounted [illegible] 12.1m. tonnes compared w[illegible] 10.1m. tonnes for exports duri[illegible] the first half of 1972.

Despite the rapid increase [illegible] production the industry is fa[illegible] ing to keep pace with domes[illegible] demand, or with demand fr[illegible] some of Japan's export marke[illegible]

Investment

The steel industry, like m[illegible] of Japan's key industries, [illegible] planning a major increase [illegible] investment in new plant dur[illegible] the remainder of the 1973 fi[illegible] year. However, the indust[illegible] expansion is being inhibited [illegible] the difficulty of finding suita[illegible] new sites for steelworks wit[illegible] the Japanese islands.

Another limiting factor is [illegible] tight money policy of [illegible] Government.

The U.S. steel industry is r[illegible] ning at full speed at the top [illegible] the current economic boom. [illegible] American Iron and Steel In[illegible] tute reported last week that p[illegible] duction passed the 100m. to[illegible] mark so far this year dur[illegible] August, when it reached a rec[illegible] 12.2m tonnes for the month.

Steelmakers have repor[illegible] that they are taking firm ord[illegible] for early 1974, and there appe[illegible] no room left for any furt[illegible] increase in supply this autu[illegible] On the contrary, there h[illegible] been signs that some steel c[illegible] panies are running too c[illegible] to capacity, and that t[illegible] may not be able to put off m[illegible] longer essential maintena[illegible] shut-downs.

The industry has been [illegible] successful in translating [illegible] booming sales into solid pro[illegible]

Freeze

The steelmakers had hoped [illegible] recoup in a round of price [illegible] creases, averaging about five [illegible] cent., which they first applied under Phase Three rules [illegible] June. They got caught in [illegible] Administration's price fre[illegible] and it is only two weeks s[illegible] they were finally able to [illegible] some joy from the Cost of [illegible] ing Council.

The upshot is that the s[illegible] companies will be allowed al[illegible] half of the price increases [illegible] have requested on flat r[illegible] products (about 40 per cent [illegible] total sales) on October 1, [illegible] the remainder allowable as [illegible] January 1.

They will be able to apply increases on other products [illegible] December 1.

STEEL OUTPUT BY THE MAIN WORLD PRODUCERS

(In thousand tonnes)

	First eight months 1973	1972	Percentage change
U.K.	17,707	16,124	+ 9.8
U.S.	90,758	79,159	+14.7
Japan	77,911	61,653	+26.4
Belgium	10,432	9,404	+10.9
France	16,453	15,598	+ 5.5
West Germany	32,617	28,714	+13.6
Italy	12,994	13,044	− 0.4
Luxembourg	3,936	3,618	+ 8.8
Netherlands	3,742	3,688	+ 1.5

Source: the International Iron and Steel Institute.

Differences in methods of computation may mean that these figures vary slightly from those put out by individual national industries.

هكذا من الأصل

Illegal profit-sharing. The £10,000,000 business.

Last year, theft cost commerce and industry over),000,000.

And that's just the cash and property.

Loss of time. Loss of records. Even loss of goodwill. of these are 'hidden extras'.

How could it affect your business?

Of course, you're insured. But what does your ırance cover? Is there something more can do to stop it happening?

We could tell you some stories that'll make you k.

Take the case of the reluctant wholesaler. en our experts surveyed his warehouse, they ımmended special precautions. Not all these e accepted. Seven months later a burglary ırred which seriously disrupted his business.

He re-examined his costings, and took our ice in full.

Three months later, thieves broke in again. y were arrested on the premises. An alarm sounded in the police station.

At Commercial Union we've specialists to you and your insurance broker make sure 're protected.

As one of Britain's largest insurance companies ıave our own crime prevention squad. Our experts in the fight against noise, pollution, dents. We have 128 of the country's best ns on fire prevention. 253 trained engineers. r 60 motor engineering specialists. own Group metallurgist and laboratory.

And we have offices and shops throughout country to see that your claims get ediate personal attention.

Ask your insurance broker about us. He d get one of our crime prevention squad ok over your premises before competition do.

The profits of your business d depend on it.

CU Assurance

Commercial Union

We'll see you better protected

THE JOBS COLUMN

Top executive for mushroom growth

BY MICHAEL DIXON

"WHEN your product's based on horse muck, it sounds funny to say you've got to be frightfully hygenic. But it's true. If a virus got in, you could lose 80 per cent. of your crop."

Richard Riddle was talking about Shepherds Grove Mushrooms, an independent company largely owned by Norwich businessman, Joe King. Its two farms on former airfields in Suffolk now produce about 5m. pounds a year.

Mr. Riddle, an Urwick Orr consultant, is running the company until it finds a new managing director. Based at the larger farm some 13 miles from Bury St. Edmunds, the recruit will be responsible to Mr. King for expanding the business, especially in the higher-priced half of the market.

The 300-employee operation is a blend of earthiness—"we shift manure around at a rate of 5,000 tons a week"—and sensitivity—"we have to cultivate and keep high quality workers and, although we draw on a widespread area, there's much competition for labour."

Recruiting and developing employees is one crucial task. A second is overcoming the other problems of growth and change, according to Mr. Riddle (Shepherds Grove Mushrooms, Stanton, near Bury St. Edmunds, Suffolk. Tel. Stanton 441).

Essential experience includes running a profitable and growing business operation, developing manpower and organising sales, and use of modern methods of management and business analysis. A process industry background, especially in the biochemistry area, would be valuable. Age 30-50.

Salary £8,000-£10,000. Car. Help with removal. Rest for discussion.

Manager for £100m.

"Any high-break-even business like this can quickly be affected by all sorts of events," Mr. Riddle said, "but we're now moving into significant profitability."

John Govett, which manages investment trust and other funds totalling £350m., wants a fund manager in the City. The job is concerned with two publicly quoted, internationally spread trusts together amounting to about £100m.

Initially the manager will work in relationship with Derek Baer, a senior managing director, with a view to assuming full responsibility and earning a managing directorship in the company within two years. There will be the allied task of serving as one of the company's specialists on the U.K. investment market.

Candidates must have been successful in managing funds, not necesarily investment trusts. "We want someone with flair, and a reputation in the field," says Rodney Wrightson (Wrightson Selection, 4 Broad Street Place, London EC2M 7HE—Tel. 01-628 9117). "Who has been responsible for saying: 'I'll buy this; I'll sell that.'" Age late 20s-early 30s.

Salary around £7,500. Profit sharing possible. Rest for discussion.

Consultant's dozen

Next May the group based on the accountancy firm of Deloitte's is due to amalgamate with Liverpool accountants, Harmood Banner. This seems bound to expand the business of management consultants Deloitte, Robson, Morrow, and perhaps explains why DRM is now looking for a dozen or more London-based recruits.

Three or four jobs are for senior consulting accountants—accountancy qualifications or higher degree in management; at least five years' ascending experience in financial or general management; age 30-36; salary £5,000-£7,000.

Three or four are for consultants in data processing—either senior folk with authoritative knowledge of at least one area of DP, or junior types with at least three years' appropriate DP experience. A good degree or professional qualification is desired. Salaries up to £7,000.

Three or four more are for "problem solvers" able to cope with—say—the design of a management information system. Degree or equivalent is needed plus several years in industry or commerce including responsibility for "getting results from a system." Salaries £4,000-£7,000.

Three are for consultant economists—either junior or senior. Good economics degree and preferably postgraduate qualification at the junior end. Same plus *practical* experience in industry, government or consultancy at the senior. Age up to 32. Salaries up to £5,000. There's also an opening for a graduate research economist right up to date technically—salary up to £3,000.

Applications to Jack Kingsley White (PO Box 207, 128 Queen Victoria St., London EC4P 4JX—Tel. 01-248 1344).

APPOINTMENTS WANTED

APPOINTMENTS WANTED

APPOINTMENTS

CONTRACTS AND TENDERS

Economic Plan
Republic of Iraq
Ministry of Works and Housing
Directorate General of Roads and Bridges
MUSAYIB BRIDGE
TENDER NO. B/10/1968

1. The Ministry of Works and Housing, Directorate General of Roads and Bridges invites Tenderers from reputable experienced international contractors as well as local contractors of class I, II according to the Classification of the Ministry of Planning, for the construction of MUSAYIB Bridge, in Babil Governorate.
2. Tender Documents, and details may be obtained from D.G. of Roads and Bridges (Legal & Contract Division) between 1/9/1973 and 30/11/1973 upon payment of ID.30/- or equivalent in foreign currency which is not returnable. The Tender Documents may be inspected also on or before the above date at the following Legations of Republic of Iraq in the following places:—
   1. London—United Kingdom.
   2. Warsaw—Poland.
   3. Prague—Czechoslovakia.
   4. Sofia—Bulgaria.
   5. Helsinki—Finland.
   6. Moscow—U.S.S.R.
   7. Berlin—German Democratic Republic.
   8. Paris—France.
   9. Belgrade—Yugoslavia.
3. Tenders must be submitted to the Secretary of Tenders opening Committee in sealed envelopes marked with the name and number of tender as well as with the word (TENDER) against a receipt on or before 12 o'clock of 1/12/1973 and if sent by post, by foreign tenderers they should be registered and should be received on or before the time mentioned. Any tender submitted to the Secretary after the above date will not be considered.
4. If the closing date is a holiday, the next day shall be deemed as closing date.
5. Tenders must be accompanied by preliminary deposit of ID.40,000/- (Iraqi Dinars Forty Thousand) which must be paid in cash to the cashier of this Directorate and the receipt for such payment must be attached to the Tender. Such cash deposit may be replaced by a bank guarantee from approved bank in Iraq.
6. A list of works of similar nature with a list of the equipment and machinery intended to be used and a copy of the constitution of the company if the tenderer is a company shall be accompanied with the tender.
7. Prospective tenderers should submit the membership certificate of Chamber of Commerce and income tax clearance for the current year. Foreign tenderers are excluded from this condition.
8. The Ministry does not bind itself to accept the lowest or any other tender.

HANI AL-SHARIF
for Minister of Works and Housing
D.G. of Roads and Bridges.

CORPORATION LOANS

CINEMAS (Contd.)

ART GALLERIES

PERSONAL

BUSINESS OPPORTUNITIES

COMPANY NOTICES

SPORT: GOLF | YACHTING | EQUESTRIANISM

Where Muirfield selectors fell down on the job

BY BEN WRIGHT

THE end, we went quietly. r the tumult and shouting he first two days a cold, Muirfield was no place for ons to be when America ed on us in the Ryder Cup es and took the score from fter the fourballs and four-s to 19-13 on the last day.

eat Britain and Ireland were beaten by a better team and ugh there may be criticisms Bernard Hunt, the British ain, he did, in fact handle resources at his disposal st perfectly. He might well given Clive Clark a game Saturday's singles, resting ard Gallacher until he was fit, but that is debatable may well have made no rence anyway.

Hunt is to be criticised, it the resources he took with to Muirfield. The selectors duty-bound to take the first in the Order of Merit and then allowed to pick four. They did not select, but ly took the next four in the r, who were Brian Huggett, e Polland, Clark and John er.

at was the safe way out, ting no controversy among players and causing no ion among the officials. t it was not was the bold, nturous way of picking ers likely to rise up in fury e sight of an American.

the four, Brian Huggett d be in the Ryder Cup team lmost anyone, provided he l still walk, even with the of sticks. He was playing y when he arrived at field, and played badly in first match with Maurice bridge. Then that old e fervour came to his aid he ended up the only un-en player on either side in match.

...ling

would be unkind, but true, ay that Garner was also aten but he, incredibly, being "selected" did not he chance to prove himself. was not played in any of natches and the logic of his tion is baffling, to say the .

ere came a time at Muirfield Bernard Hunt was stuck. needed a replacement for sick Gallacher and he con-d that there was no one the same qualtities with to replace him.

nty of gritty golfers were t Muirfield: Peter Townsend example, Doug McClelland John O'Leary, perhaps even proven match players like Ronnie Shade or Tommy Horton. All these were available to be selected and, instead, a man who was not even given a game was taken along. It seems that a place in the Ryder Cup is going to be a reward for previous stroke-play deeds, rather than based on the possibility of a player being able to beat an American.

Polland and Clark got into the side on their stroke play record. While it may be true that if you consistently get round a golf course in fewer strokes than another player you will, almost certainly, win most of the matches you play, it is not true that all good stroke players react the same way when it comes to a big match. The pressures are different, especially in the Ryder Cup. There could be no better example than Huggett of the class match player who, at the time of his selection was playing badly in stroke play, and yet responded to the challenge of beating an American.

Kudos

The problem is, of course, that this is a professional game and the team is selected by professionals. They are only too aware of the kudos that go with the tag "Ryder Cup player." In order to find the right teams the selectors will have to find someone who really will select, who will be prepared to go for players like those I have previously mentioned.

Hunt's singles order for the morning was impeccable. He led off with Barnes and Gallacher who, if he was fit to play, had to be fit enough to play near the top, and followed with Peter Butler who had played well towards the end of his fourball match on Friday.

The move back-fired. Barnes lost a two-hole lead to Billy Casper and went right to pieces at the end. Gallacher was clearly not in good enough shape to cope with Tom Weiskopf, and indeed, you need everything going for you to beat him. Butler was four down after six and now gloom was mixed with grey at Muirfield. Behind them Neil Coles came to the 18th green one-up, three-putted, and sent Gay Brewer away happier than he had been all match.

Even further behind was Maurice Bembridge who was two down with three to play against Jack Nicklaus and could be safely written-off. Except that suddenly, Nicklaus fell short of the 18th green, chipped badly and lost the hole to a par. At the 18th Nicklaus was short with his second, hit a very poor putt from off the green and Bembridge, who had hit a superb six iron into the middle of the green, grabbed his half.

There was not much of that sort of thing about. Peter Oosterhuis lost a two-hole lead to Lee Trevino and halved, although he did beat Arnold Palmer in the afternoon to come out top scorer with four points.

Demolished

Behind him came Jacklin and Huggett with 3½ points, with the Welshman doing the best he could for us in the afternoon by playing top and demolishing Homero Blancas by 3 and 2. Jacklin, however, seemed tired and although he was playing a much older man in Casper, who had also played in all six matches, he had no answer to the American's outward half of 33.

Bembridge was next best with three points out of six, which is rather better than it looks since he had Nicklaus on the other side in both his singles and once each in the foursomes and fourball matches. He lost in the afternoon singles, despite being one up with three to play.

Nicklaus holed birdie putts of 25 and 15 feet at the 16th and 17th just when he needed them most, and those putts sum up most of the whole sorry tale of Muirfield 1973.

Why Heath was not chosen for Southern Cross series

BY ALEC BEILBY

YACHTSMEN AND others have been speculating during the past few days as to why Mr. Edward Heath and the Morning Cloud crew were not selected by the special Royal Ocean Racing Club Committee to represent Britain in the Australian Southern Cross series of off-shore races. These will be sailed off Sydney this winter and culminate in the 600-mile Sydney-Hobart classic.

The answer—it will disappoint those seeking sinister reasons—is that Morning Cloud was chosen, but when Mr. Heath was asked to lead the British challenge for the trophy, he declined.

From his own point of view, Mr. Heath considered the event was too far ahead and too far away from home for him to be able to commit himself at an early date with the certainty that the selectors required.

Apart from that, Owen Parker, who takes charge of the yacht when Mr. Heath is not able to be aboard himself, has indicated that his business, marketing marine equipment, could not stand another two months' absence following immediately on the demands of an Admirals Cup summer.

Meanwhile, the selectors, sure in the knowledge that both Donald Parr's Quailo III and Arthur Slater's Prospect of Whitby were definitely available, had to find one other yacht.

For reasons of morale, they were reluctant to have to make their choice by reason of elimination of yachts chosen and found to be unavailable.

Once John Prentice, Lloyd's broker, and owner of the successful Swan 44 Battleery, had indicated he could not go, they chose a yacht certainly available in that her owner, Alan Graham, was seeking independent aid from sponsors to help him compete in Australia in his own right.

His yacht, Superstar of Hamble, the third yacht in the British team, has been among the leaders throughout the season. It beat the entire British Admirals Cup team in the 220-mile Channel Race which opened the Admirals Cup series, was third in the Admirals Cup selection trials and is therefore by no means a Hobson's choice.

Amid the discussions and decision by the selection committee during the past week, both Quailo and Prospect have been preparing shipment from Liverpool early next month.

Arthur Slater, a veteran of campaigning "Down Under," had already arranged the necessary support from various sources, raising about £50,000 to cover both the cost of challenging for the Southern Cross Trophy this winter and of sending a British team to Newport, Rhode Island, to challenge for the Onion Patch Trophy, America's equivalent event next summer.

The sponsors who are sharing the load equally are, Thomas Tilling, the Midland Bank, Associated Portland Cement, Fodens, Trafalagar House-Cunard, and Alfred Dunhill.

Shipping of the yachts, flights for the crews, accommodation and day-to-day expenses are all covered by the sponsors' genrosity, but owners of the yachts have to meet considerable expense themselves. As he prepared his yacht for shipment, Alan Graham, a Midland newspaper publisher, explained where the money goes.

After a full season of racing, his yacht will be thoroughly checked and the bottom repainted with a special graphite-based compound paint. To meet Australian weather conditions, he is converting the yacht up to a 160 per cent. rig, involving buying six new headsails.

Radio equipment, not compulsory in Britain, will have to be bought and installed to meet Australian requirements. That, added to the replacing of running and standing rigging, purchase of spares not obtainable in Australia and life-saving equipment to meet Australian rules, as well as the employment of one professional hand to maintain the yacht, will, he estimates, leave him little change out of £5,000.

Sue Hatherly best at Cirencester

BY MICHAEL DONNE

MISS SUE HATHERLY who did so well at the recent Burghley Horse Trials, confirmed her position as one of Britain's most promising young event riders by not only winning the Midland Bank Open Horse Trials Championships of Great Britain at Cirencester Park over the week-end, but also coming sixth in the same event with her other horse.

Of a field of 38 starters, she put up the two fastest times of the day on the cross-country course. Riding Harley, she incurred only 13 time penalty points on a course which saw the downfall of several established favourites.

This performance, allied to a good dressage score, gave her a total of only 49 penalty points to give her the victory in the competition. With her other horse, Devil's Jump, she came sixth.

Second in the Open Championship was Mrs. Fiona Reive, riding her bay gelding, Tumbling Tam with 51 penalty points. Third was Mr. Michael Moffett riding Demerara, with 59 penalty points.

The fact that only 10 points separated the first three riders in the competition indicated again that in horse trials it always pays to build up the best possible dressage score before embarking on the cross-country test.

Even the most experienced riders and horses can get into trouble on the cross-country, as happened to Marjorie Comerford on The Ghillie. They had scarcely begun in heavy rain, when they fell at the first fence and Mrs. Comerford was obliged to retire from the competition.

Diana Thorne on The Kingmaker, who, after coming second at Burghley recently, was much fancied to win the Open Championship, had two falls at successive fences on the cross-country, and had to retire as her horse went lame.

Virginia Holgate, the new Junior European champion, successfully got round the course once on her championship horse, Dubonnet, to come seventh overall, but had a severe fall on her second ride of the day, Jason VI, incurring jumping and time penalties to put her well down the list.

At the end of the dressage phase, Princess Anne had been in first place with Doublet, six points ahead of her nearest rival, but she had a refusal on the cross-country, which together with time penalties, put her out of the running for the prizes.

The Novice Championship was won by Mr. John Pullen, riding the brown gelding, Samovar, with a total penalty score of only 40. Second was Lieut. Malcolm Wallace riding Felday Fair, with 47 penalty points. Third was Miss Patience Green riding Faramiar.

Peyton: traffic curbs needed

BY RAY DAFTER

E RESTRICTIONS on road were necessary if cities the countryside were to being submerged under a eral pall of asphalt," Mr. Peyton, Minister of port Industries, has d.

s damage to the environ-would occur if the future em of motor traffic—22m. les by 1980—were allowed unrestrained, he told the nal Conference for the ction of the Countryside in ick at the week-end.

conference, organised by Council for the Protection ral England, was told that and cities would be forced ncourage use of cars and to ct access, particularly at periods. The Government led to introduce legislation hten the enforcement of ng restrictions by making owner of the offending e liable for the offence.

er measures being studied, Mr. Peyton, included parking controls, physical measures, ementing licensing and pricing. Large vehicles l be banned from narrow s.

Peyton said he also red a policy of confining s to designated routes. This required a first-class road network linking the main towns and cities with adequate roads to the ports, and by-passing small town and villages.

Electricity Boards offer scholarships

THE ELECTRICITY supply industry is again offering this year a number of university scholarships to school-leavers who wish to read full-time for an honours degree in electrical or mechanical engineering.

They are in addition to the industry's engineering traineeships. The Central Electricity Generating Board offers scholarships in both mechanical and electrical engineering, while area electricity Board's scholarships are in electrical engineering only.

Boys and girls aged between 18 and 21, with at least three A level passes, including mathematics and physics, are eligible.

The awards provide for the payment of a maintenance grant of £535-£550 a year, according to the university chosen, and all approved fees. No reduction is made on account of parents' income.

A changing role for medical charities

BY DAVID FISHLOCK, SCIENCE EDITOR

"IT IS the Government's job to help them, not mine," is a familiar response to any appeal to help the sick by contributing cash for more medical research. But the fact remains that the British donated about £15m. last year to medical research: a sizeable sum when it is remembered that the Medical Research Council, the prime source of research and funds for medical science, spent less than £29m.

Sometimes the donations come in large dollops, such as the £5m. given by Sir Halford Reddish, chairman of Rugby Portland Cement, in 1971 for the building and running of a brand-new research institute for heart and lung diseases in Sussex. (This was claimed to be the biggest single donation ever made in this country for medical science.) Another big one came from Mr. (now Sir) Michael Sobeil in 1967—£500,000 for the Cancer Research Campaign.

But much of the cash comes in quite modest amounts from flag days and football pools, from Christmas card sales and regular Christmas donations, from special appeals increasingly backed up by all the expertise of a high-pressure publicity campaign. This year, for example, two charities, the Imperial Cancer Research Fund and the National Fund for Research into Crippling Diseases, which share the proceeds of a football pool operated by Pembroke Donations, will each receive over £400,000 from this one source. Last year, the two biggest charities of nine that support cancer research in Britain spent £230,000 of their income on promotion and publicity.

The private donation has always been an important factor in this country, and there is a good case for saying that its importance will increase in future because of Government pressure for greater "relevance" in Government-funded medical research.

Last year the Government accepted Lord Rothschild's arguments for increasing the "relevance" of medical research by gradually transferring control of part of the Medical Research Council's budget to the Department of Health. The plan is that this portion shall be spent on problems designated by the department's chief scientist, Professor Sir Douglas Black, and his staff.

This departure from a long-standing tradition of total independence in choice of research was fiercely contested at first by the medical scientists. But Lord Rothschild himself had already departed from another tradition when he abandoned morbidity as the yardstick of research priority. He chose instead as his yardstick occupancy of hospital beds. Since the hospital service accounted for precisely half of the NHS budget of £2,260m. last year, he made a strong point when he showed

A large proportion of money needed for medical research comes from donations.

that there was no correlation at all between bed occupancy and the Medical Research Council's programme.

The NHS cares for a large number of bedridden patients suffering from mental, bronchial, rheumatic, addictive or other afflictions that have attracted little attention from the Medical Research Council. It also spends heavily on such mundane diseases as dental caries (about £100m. a year), research into which has been left largely to the toothpaste makers. The Rothschild proposals will permit the NHS to steer research funds in these and other directions in the hope that hospital costs can be reduced.

But the quest for relevance raises new risks. You cannot transfer some £7m.-£8m. of medical research funds to specific tasks without damaging some of the more basic research. In a year or two's time, it might become clear that some of the work cut out holds the clue to problems of real relevance.

The voluntary funds, as sponsors of medical research, are the public's great safeguard against "accidents" of this kind, believes Dr. Peter Williams, director and secretary of the Wellcome Trust. With an income approaching £3m. this year, this is the largest of the foundations which support a broad spectrum of medical research.

Williams can move quickly to fill a gap where the more highly committed big research centres react much more slowly. He cites the way the Wellcome singled out the neglected topic of skin diseases ("it doesn't attract money like the sick child or cancer") and raised hopes for sufferers by creating research fellowships.

Only about £1m. of the Wellcome's budget is earmarked, leaving nearly £2m. for swift support in matters of rising importance or promise. Other British foundations are smaller or less committed to medicine. The Nuffield, for instance, has shifted much of its once-strong interest to educational and social research. The Wolfson Foundation is strong on medicine but makes its mark mostly by financing new laboratories. The CIBA Foundation, with funds of only £120,000 a year, spends them very shrewdly on symposia of very high reputation aiming to co-ordinate medical research.

Co-ordination, however, is a highly sensitive subject with the charity-financed research organisations. They tend to be independent; inevitably they are competing for public favour—and there are striking disparities in the readiness with which the public will give to different programmes.

Cancer, and heart and rheumatic diseases all do well. The reason, says Benedict Nightingale in his book "Charities" published by Allen Lane earlier this year, is that these are the diseases mainly feared by the older people, "those more likely to have money to give and legacies to leave."

Lord Zuckerman, reporting to the Prime Minister on cancer research in Britain, estimated that of the £10m. spent in 1971-1972, some £6m. came from the two big charities, the Imperial Cancer Research Fund and the Cancer Research Campaign.

In 1969 the Government persuaded these two charities and the Medical Research Council to form a joint co-ordinating committee which, without affecting anyone's independence, would keep each party (and the Government itself) informed about progress and policies.

But what of the myriad other voluntary research bodies, from the Arthritis and Rheumatism Council for Research to the Workpeople's Collections Fund (devoted to the afflictions of textile workers)? The total research funds of about 90 charities are about £9m.—not much more than the two cancer funds can command.

Heart research collected £452,000 last year, and the rheumatic diseases £445,000. Cystic fibrosis, an incurable hereditary disease that upsets the lungs and digestive systems of children, has a sufficiently powerful emotional appeal to support 41 voluntarily financed research projects.

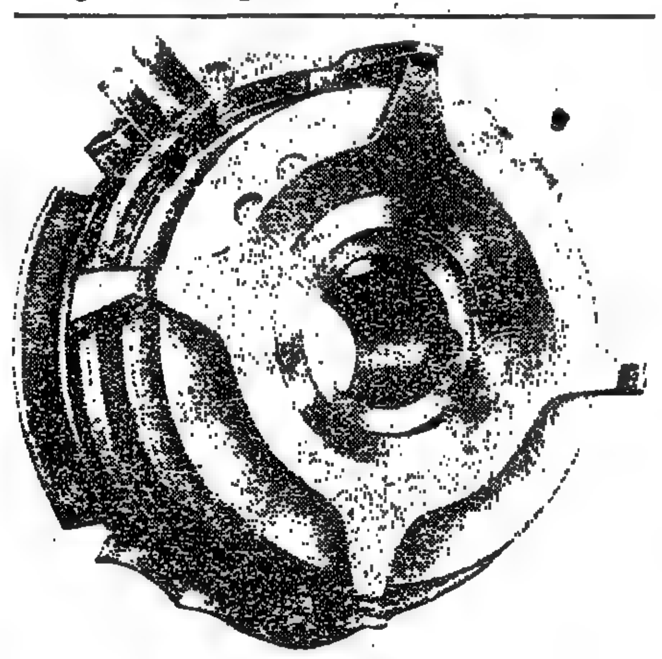
But other diseases for which there is no cure in sight arouse little response with the public, among them the "wasting" diseases, muscular dystrophy and multiple sclerosis. The latter even has two societies competing for a public response that in 20 years has produced only a few hundred thousand pounds for research.

People may find these diseases hard to face—or even pronounce. But what of migraine which, according to an Office of Health Economics study last year, afflicts about 5m. people in Britain? The Migraine Trust set out to raise £750,000 over the decade 1965-75. By 1970 its income was less than £50,000. Its current target is much more modest—£175,000 over the next seven years, which will cover the cost of running the newly opened City Migraine Clinic in London and leave about £25,000 a year for research.

Other diseases seem to be shunned precisely because they are so prevalent and so feared, like the mental disorders. These diseases — schizophrenia, for example—accounted for more NHS beds than any other group of illnesses last year. Yet the Mental Health Research Fund could find only £65,000 for research.

With research funds so dependent upon emotional rather than intellectual appeal, is there not a case for greater co-ordination among the 90-odd charities? Everyone is wary of any suggestion that funds might be shifted from a well-endowed sector — say cancer — to a penurious one. In any event it can always be argued that the first sign of real promise in almost any sector (except the rarest diseases) will find the pharmaceutical companies tumbling over themselves to fund research projects.

This year Dr. Williams and Mr. Duncan Guthrie, director of the National Fund for Research into Crippling Diseases, have persuaded the medical foundations and charities to form a standing conference to keep one another informed. In November the conference will meet the Medical Research Council, the NHS and university scientists to hear what they think of the state of research in universities, where most of the charity-funded work is done. Dr. Williams suspects they will discover that growing administrative burdens are reducing opportunities for many of the most productive research workers.



Platinum price up again

By John Edwards

ANOTHER RISE in the price of platinum, and other "noble" metals, is likely following the move by Engelhard Minerals to raise its U.S. prices, on which world market quotations are based.

Engelhard has put up its price for platinum by $8, to a new range of $158-$163 an ounce. Increases have also been made for rhodium and iridium "to reflect increased costs and good demand," according to a company spokesman.

The U.K. producer price of platinum was increased last week by £1.50 to a range of £66-£68 an ounce, to take account of the lower value of sterling.

If the new U.S. price is followed, in accordance with normal practice, there should be an increase of around £3.50 an ounce, dependent on the sterling-dollar exchange rates.

Irish plan major U.K. tourism drive

By Arthur Sandles

THE IRISH Tourist Board, encouraged by a sudden revival in tourism from the U.K. this year, is about to embark on a major sales effort for 1974.

In co-operation with Aer Lingus, B and I Line and British Rail, a series of Irish Travel Centres are to be opened in British cities—and £120,000 is to be spent on a national advertising campaign.

An indication of the "normalisation" of tourism relationships between the two countries is the fact that British coach parties will be returning to the Republic for the first time for several seasons.

Next year CIE, the Irish coach company, and Britain's National Bus Company will be co-operating on six routes.

Overall results for Irish tourism this year suggest that traffic to Ireland will be up by 10 per cent. A further increase of 13.5 per cent. has been predicted by Mr. Eamonn Ceannt, director-general of the Irish Tourist Board.

The Board seems hopeful that it will be able to co-operate much more closely with the British Tourist Authority.

The Irish are keen to get the message across that the Irish and English pounds are in the same economic boat. Research, so far, seems to indicate that the absence of currency exchange complications has helped the Republic's tourism ambitions as far as Britain is concerned.

There is also going to be a winter "educational" programme in Ireland itself among people working in the travel business. About 1,000 personnel are expected to take part in schemes aimed at improving Ireland's competitiveness.

In its calculations the Irish Tourist Board has assumed that both ferry and air fares will rise, but it is hoped that a variety of new promotional fares will be introduced.

Fewer job seekers in Wales

Financial Times Reporter

EVIDENCE OF a modest advance in industrial activity during the second quarter of this year is provided by the Welsh Office's latest progress report.

Unemployment in Wales at the end of the period, in line with that for the rest of Britain, was running well below that for the corresponding time last year. The seasonally adjusted figure at the end of June was 35,700, showing only a slight fall from 36,000 registered for the first quarter. In June 1972 the seasonally adjusted total was 47,100.

Welsh coal production for the first half of the year was 1m. tons ahead of that for the first six months of last year. The 1972 figure was distorted, however, by the seven-week miners strike and output per manshift fell by 2.5 cwt. in the first part of 1973 to 27.9 cwt.

The weekly average of steel production in Wales, in the first half of 1973 advanced by 7,300 tonnes to 165,300 tonnes despite labour troubles at the Llanwern works which interrupted production early in the year.

A significant rise also took place in the level of Welsh building and civil engineering activity. During the first five months contracts placed were valued at £165m., compared with £135m. for the corresponding period in 1972.

Tory MP to stand down

MR. JOHN HILL, Conservative MP for South Norfolk since 1955, is not to seek re-election at the next General Election. He told the local party executive that he wanted to resume many activities, principally farming.

Mr. Hill, 60, a barrister, is a member of the Parliament of Europe.

General Election: J. E. B. Hill (C.) 22,614; C. Shaw (Lab.) 17,172; S. E. Goldstone (L.) 3,811. Majority 5,442.

CONSUMER CONFIDENCE

A revival—but slight

FINANCIAL TIMES REPORTER

CONSUMER CONFIDENCE improved slightly in September compared with August, but remains at a fairly low ebb.

On balance, people still feel that this is a good time to buy consumer durables, but, with increasing frequency, it is the expectation of future price increases which is responsible for this view rather than any feeling of improved financial well-being.

These are the main findings of the latest survey of financial expectations undertaken for the Financial Times by the British Market Research Bureau. The survey is based on a nationally representative sample of 964 adults interviewed between September 6 and September 12.

Mortgage rate

Conclusions therefore are based on data obtained before the announcement of an 11 per cent. mortgage rate by the Building Societies Association, and it will not be until next month that the effects of this on consumers' outlook can be assessed.

The slight revival in consumer confidence is solely due to a more optimistic view of the next 12 months by women. Confidence among men, in both the ABC1 and C2DE categories, slipped away further as compared with August.

Overall the consumer confidence index—the difference between respondents expecting conditions to get better and those who expect them to get worse in the coming year—improved from −29 per cent. to −25 per cent. But among ABC1 men 20 per cent. on balance expect things to get worse whereas three months ago rather more than 20 per cent. on balance were looking for an improvement.

A month ago, women were apparently considerably more pessimistic than men, and this month's figures redress the situation somewhat. On balance 29 per cent. of C2DE women expect things to get worse, compared with 36 per cent. a month ago.

In relative terms ABC1 women now form the most optimistic group with a negative balance of only 17 per cent. compared with −28 per cent. in August.

As far as demand for consumer durables is concerned, there is a positive balance of 12 per cent. of all respondents who feel that now is a good time to buy. This compares with 8 per cent. in August and is almost the same as the July figure, so that the fluctuations may be due in part to seasonal factors.

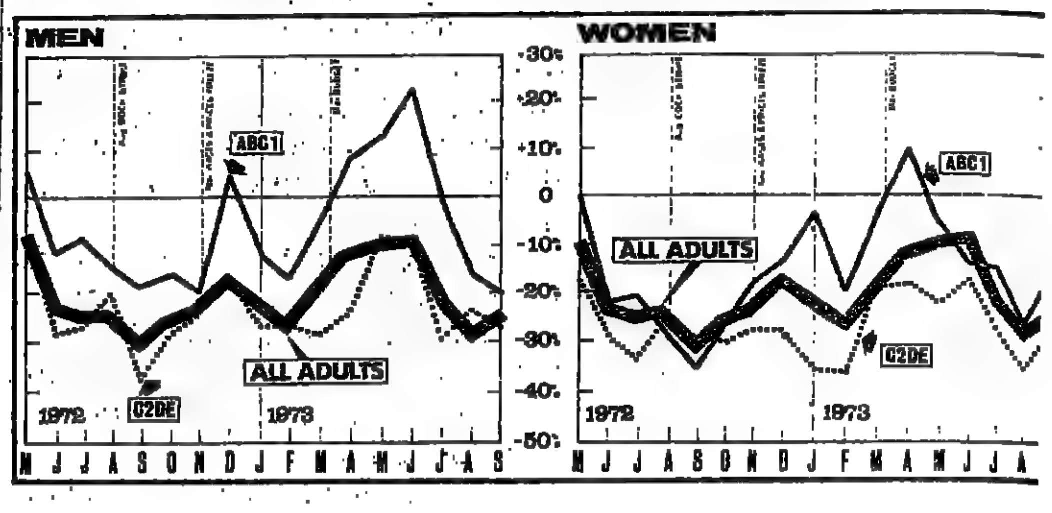
Rising prices

There is no doubt, however, that the expectation of rising prices is more and more the cause of the desire to buy now rather than later. No less than 56 per cent. of the sample—the highest percentage recorded so far—gave rising prices as the reason for preferring not to defer durable purchases.

For the second month running there has been a slight increase in the number of respondents who feel that they are better off than they were 12 months ago. Notwithstanding this, a balance of 13 per cent. of the sample still said they were worse off than they were at this time last year.

THE NEXT 12 MONTHS

Percentage balance of respondents expecting conditions to improve in the next 12 months over those expecting them to worsen.



BETTER OR WORSE OFF

Are you and your family better or worse off financially than a year ago? Percentages refer to those saying "Better off" : "Worse off" in brackets—"The same/Not sure."

	All Adults	ABC1 Men	ABC1 Women	C2DE Men	C2DE Women
September 73	28 : 41 (31)	34 : 35 (31)	32 : 30 (38)	26 : 48 (26)	23 : 42 (
August 73	26 : 42 (32)	30 : 35 (35)	30 : 35 (35)	23 : 43 (34)	23 : 48 (
July 73	24 : 43 (33)	30 : 35 (35)	23 : 40 (37)	23 : 45 (32)	21 : 44 (
June 73	36 : 34 (30)	53 : 26 (21)	33 : 30 (37)	36 : 37 (27)	31 : 36 (
May 73	33 : 38 (29)	37 : 31 (32)	36 : 33 (31)	33 : 41 (26)	29 : 40 (
April 73	29 : 39 (32)	37 : 34 (29)	27 : 37 (36)	32 : 40 (28)	22 : 44 (
March 73	25 : 41 (34)	32 : 40 (28)	30 : 34 (36)	21 : 41 (38)	21 : 47 (
February 73	29 : 37 (34)	30 : 32 (38)	24 : 39 (37)	31 : 39 (30)	29 : 37 (
January 73	31 : 35 (34)	38 : 31 (31)	32 : 30 (38)	31 : 40 (29)	29 : 37 (
December 72	32 : 34 (34)	37 : 30 (33)	26 : 33 (41)	35 : 34 (31)	28 : 36 (
November 72	31 : 39 (30)	40 : 38 (22)	28 : 34 (38)	33 : 40 (27)	28 : 41 (
October 72	21 : 67 (12)	31 : 56 (13)	16 : 71 (13)	22 : 64 (14)	16 : 71 (
September 72	33 : 36 (31)	43 : 26 (31)	30 : 27 (43)	32 : 39 (29)	29 : 40 (
August 72	28 : 36 (36)	34 : 32 (34)	27 : 42 (31)	29 : 25 (46)	25 : 36 (

© BMRB, Financial Times. Full survey purchasable from BMRB.

هكذا من الأصل

It's not unusual to ask the impossible of a car. But it's a little unusual to get it.

Most people buying a new car want more than it's actually possible to give them.

They want good performance. They also want good fuel economy (which often means sluggish performance).

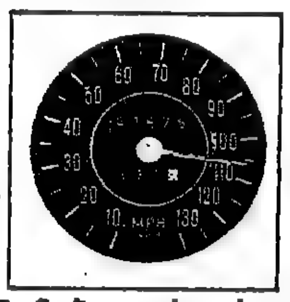
They want plenty of interior space. But they don't want to have to park a six foot wide monster in their garage.

They want a car that can cruise smoothly on a motorway. And corner surefootedly in a bend. But the qualities that make a car stable in a straight line can also make it less steady going round a corner.

In short, quite naturally, most people want to have their cake and eat it.

A requirement which the Audi 100LS answers to a surprising degree.

Take the engine. Though it's slightly smaller than other cars in its class it can cruise all day, without strain, at 106 mph (where the law allows). Something that other cars in its class can't manage.

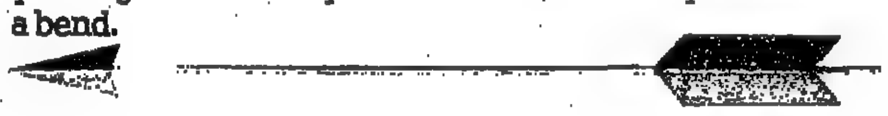


Try finding another saloon in the two litre class that can keep this up all day.

Again, the Audi's 0-60 mph rating is unusually quick (11.7 seconds). But the petrol consumption isn't: "Motor" thought 25 mpg typical (other big saloons with 25 mpg are quite a few seconds behind us).

On a long drive, you'll find we also give you the best of both worlds. With 60% of the weight over the front wheels, the Audi follows a straight line course like an arrow (very useful on the motorway).

But as arrows aren't so good at going round corners, you might reasonably wonder about its ability to take a bend.

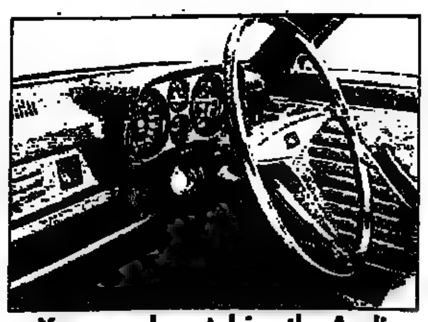


We've found a way to make an arrow go round corners.

In fact, because we have the advantage of front wheel drive, the car is pulled round the corner from the front, rather than pushed from the back (as is the case with most cars). So it corners smoothly and safely.

Another thing that helps the Audi hug the road in a bend is the fact that its centre of gravity is about 10% closer to the ground than is normal for cars in its class.

The price for that, you might think, would be that the bottom of the car would be dangerously close to the ground. But, in fact, we've carefully recessed the brake lines and the exhaust into a shallow tunnel in the floor of the car, leaving the underbody smooth and flat.



You can almost drive the Audi with your little finger.

So, in spite of the low centre of gravity, you've actually got more ground clearance than even a Range Rover. (It's 7½" off the ground compared to our 7¾").

Take the problem of parking. You'll find the Audi needs about 10 lbs less effort on the wheel than other cars in its class.

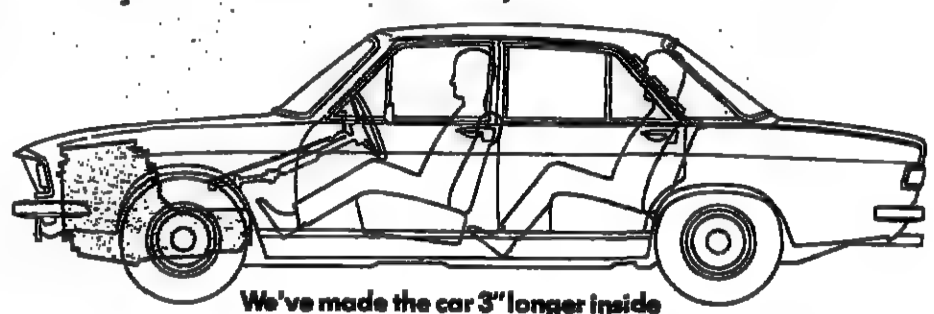
You might expect the price of this light fingered steering would be a fair amount of arm flailing to park the car.

In fact, the Audi's wheel needs just 3¾ turns lock to lock, which is less than virtually any other car in its class.

Look inside the car and you'll find that there, too, we've managed to give you the benefit of apparently conflicting virtues.

The passenger compartment is three inches longer than you'd expect in a car this size. (That three inches helps make it possible for two six-footers to sit, one behind the other, in comfort).

Where do we get the extra three inches from? Simply by putting the engine as far away from you as possible (it's actually in front of the front axle).



We've made the car 3" longer inside without making it 3" longer outside.

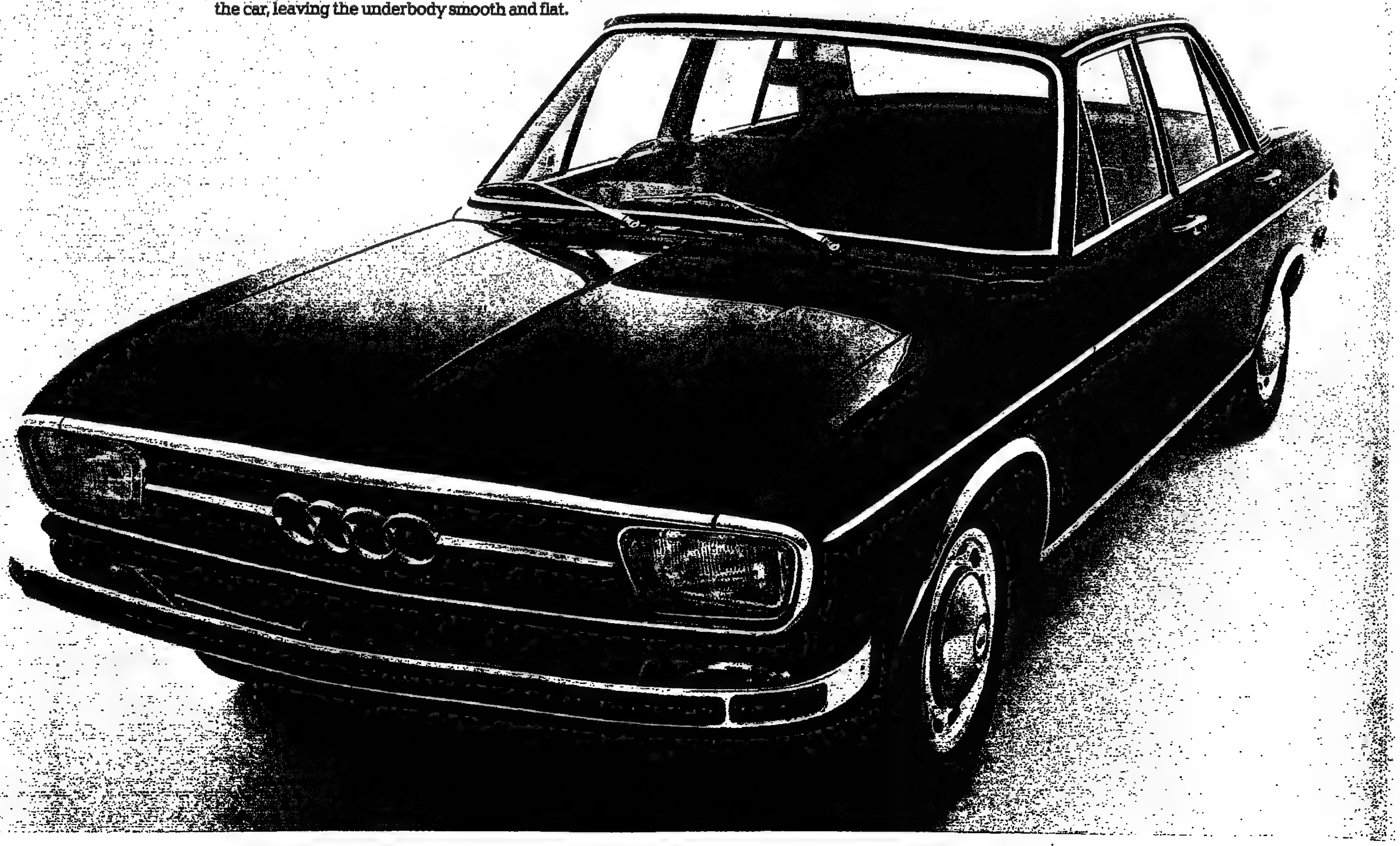
Finally, you will be relieved to know that though the Audi doesn't look clumsy and ungainly, it can actually take 20% more impact energy than the strictest regulations in the world require. Proving that a car can be built like a tank without actually having to look like one.

Go along to your local Audi NSU dealer for a test drive, and you'll discover the other near impossibility that we've managed.

The not inconsiderable feat of making a luxury car with this sort of specification cost no more than £2,227.

AUDI NSU

If you want a better car, think about it.



Audi 100LS £2,227. Manufacturer's recommended retail price including VAT and special car tax. Prices may be subject to currency surcharge.

Customer Information Department, AUDI NSU (GB) Ltd., Quadrant House, Church Street, Dunstable, Bedfordshire. Tel: 0582 603171. Export enquiries to: 95, Baker St., London W.1. Tel: 01-935 0088. A member of the Thomas Tilling Group.

University students need private means, says NUS leader

PRIVATE MEANS are becoming more and more necessary for students going to universities, Mr. John Randall, new president of the National Union of Students, says.

In the effort to get adequate grants, rent strikes and catering boycotts would be back again on the university and college campuses this autumn. Help in the campaign would be sought from trade unions and other groups on low, fixed incomes, especially pensions.

Mr. Randall states the policy in a new union booklet on grants, published to-day. Underlying the claim of the 500,000 strong NUS, he said, was the theme of open access to further education.

At present, it was restricted by a Government policy which failed to provide sufficient places, and by the lack of adequate financial support for students.

"Increasingly, further and higher education is becoming the preserve of those able to supplement their grants by private means," he claims.

The money problem was most acute in further education where most grants were made at the discretion of the local authority. This "should be abolished."

A fraction of the money being spent on Concorde would end student hardship caused by lack of cash and the anomalies of the present system, Mr. Randall says.

Last May, following a persistent student campaign, the Government increased by £20 the main rate of grants. It came into effect this month. Students on full grant at London and Oxbridge, living away from home, now receive £520 a year, and those at other universities £485.

Tory protest over London school board banning

ANGRY TORIES on the Inner London Education Authority claim they have been banned by the Labour majority group from serving as governors at voluntary-aided London grammar schools.

Mrs. Diana Geddes, leader of the ILEA Conservatives, said: "The ban is an affront to democratic local government. The Socialists caucus has succeeded with a directive, in removing its opponents. It is incredible that one-party government should be adopted by self-professed democrats."

Labour had ruled that only its own members shall qualify for places at 27 voluntary-aided grammar schools to which the authority appoints five or fewer governors, she claimed.

Most of the schools affected were church schools in boroughs including Hammersmith, Kensington, Camden, Westminster, Lewisham, Southwark and Lambeth.

"In a desperate effort to force comprehensive education on London, Labour are adopting bully-boy tactics. The result is that thousands of parents, who are far from socialist inclined, will have socialist policy foisted upon them without question at board level."

The number of Conservative seats on other Inner London school boards has also been halved from four to two, says the Tories.

Labour has rejected their protests, and Mrs. Geddes has written to Mrs. Margaret Thatcher, Secretary for Education and Science, informing her of the position.

FT GROCERY PRICES INDEX

Highest this year as feed stuffs take their toll

BY ELINOR GOODMAN

THE RECENT run of prices increases in animal feeding stuffs is now beginning to take its toll on fresh foods in the shops.

The Financial Times Grocery Prices Index rose by 2.8 points to 129.39 in the five weeks to September 18 due, to a large extent, to increases in eggs, pig meat and chicken—all products from animals reared largely on costly animal feeds.

This follows two months in which the index has fallen and means that it now stands at its highest level this year. The increase compares with a drop of 1.26 points in September last year.

Take longer

This month's rise is in some ways more worrying in the context of the Government's counter-inflation policy than this year's biggest single monthly rise of 3.54 points in June.

The June increase was largely due to seasonal factors which in turn brought the index down in the following two months. The factors behind this month's are likely to take longer to right themselves.

Several of the major animal feedstuffs manufacturers have already had five price increases approved by the Price Commission, and though the fall in world grain prices may make it difficult for them to justify more, it will probably be some time before any world reduction is reflected in cheaper animal feedingstuffs, particularly in view of the currency situation.

In the case of eggs, which showed a small increase in price in September last year, the price situation was further aggravated by a cut-back in production following last year's glut. This meant that the FT shoppers were having to pay an average of 5p more a dozen for large eggs. In some shops the increase was as much as 8p.

It was in the meat category that prices rose fastest this month taking the total bill for 11 shoppers over £100 for the first time since the index started. The total bill was just under 5 per cent. up on last month despite relatively stable lamb and beef prices. Roasting chickens were costing between 3p and 8p more a pound than last month, while short bacon was up around 5p a pound in most shops. Streaky bacon increased by between 2p and 4p, while ham had also gone up in many shops.

The cheering news for the Government in this month's index was the stable price situation in many of the areas directly controlled by the Price Com[...] sion. The sugar and tea cate[...] was up only 7p and can[...] section only 3p. (Retai[...] report, however, increases in imported canned fruit and v[...] tables now coming into the sh[...] as a result of poor harvests [...] currency situation.)

The preserves bill went [...] 15p, largely due to rises in h[...] and jam prices, while the b[...] category showed a drop of [...] with special offers off-se[...] manufacturers' increases [...] biscuits and cereals.

Good supply

The only exception to [...] stable situation in manufact[...] food was in frozen food w[...] went up by over 2 per cen[...] September. Frozen plaice f[...] were selling at an average o[...] a packet more than last m[...] and there were increases o[...] on several other big se[...] frozen lines.

The fruit and vegetable [...] again showed a drop of 2 [...] cent. Potatoes, one of [...] largest single items in the shopping basket, were [...] average 1p a pound cheaper [...] last month as were carrots [...] onions. Cooking apples [...] also considerably cheaper [...] in August, and in good supp[...]

TOTAL FOR 11 SHOPPERS

	September £ p	August £ p
DAIRY PRODUCE, FATS, EGGS, ETC.	72.57	69.77
SUGAR, TEA, COFFEE AND SOFT DRINKS	29.63	29.56
BREAD, FLOUR, CEREALS, BISCUITS AND CAKES	40.55	40.64
PRESERVES AND DRY GROCERIES	14.16	14.01
SAUCES AND PICKLES	6.81	6.54
CANNED FOODS	24.53	24.50
FROZEN FOODS	21.77	21.11
MEAT, BACON, ETC. (FRESH)	102.78	97.90
FRUIT AND VEGETABLES	41.07	42.15
NON-FOODS	28.53	27.95
	382.40	374.13

OLD INDEX

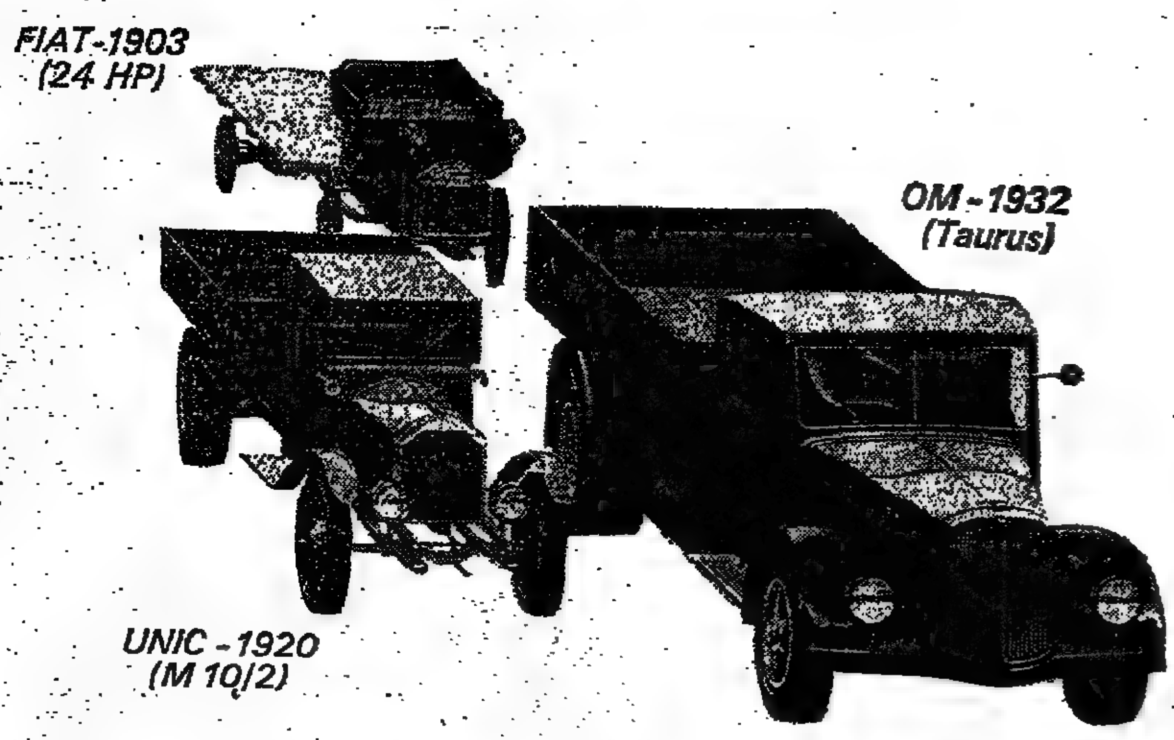
1964: Nov. 100; Dec. 102.35.
1965: Jan. 101.41; Feb. 102.23; Mar. 102.58; April 103.16; May 103.70; June 105.28; July 105.88; Aug. 10[...] Sept. 103.66; Oct. 103.13; Nov. 103.95; Dec. 105.93.
1966: Jan. 105.80; Feb. 104.66; Mar. 105.39; April 106.78; May 108.21; June 109.90; July 109.34; Aug. 10[...] Sept. 107.74; Oct. 108.81; Nov. 107.47; Dec. 108.16.
1967: Jan. 108.85; Feb. 108.20; Mar. 107.66; April 108.20; May 109.75; June 113.96; July 110.45; Aug. 10[...] Sept. 106.18; Oct. 106.66; Nov. 107.58; Dec. 111.67.
1968: Jan. 112.91; Feb. 112.12; Mar. 111.75; April 112.10; May 112.68; June 114.75; July 112.20; Aug. 11[...] Sept. 111.12; Oct. 111.47; Nov. 112.06; Dec. 114.49.
1969: Jan. 114.80; Feb. 116.70; Mar. 117.67; April 118.31; May 120.57; June 122.92; July 121.59; Aug. 11[...] Sept. 117.48; Oct. 118.14; Nov. 118.83; Dec. 121.23.
1970: Jan. 122.04; Feb. 123.05; Mar. 123.70; April 125.82; May 126.32; June 129.76; July 129.42; Aug. 1[...] Sept. 127.03; Oct. 126.67; Nov. 127.68; Dec. 128.5.
1971: Jan. 131.23.

NEW INDEX

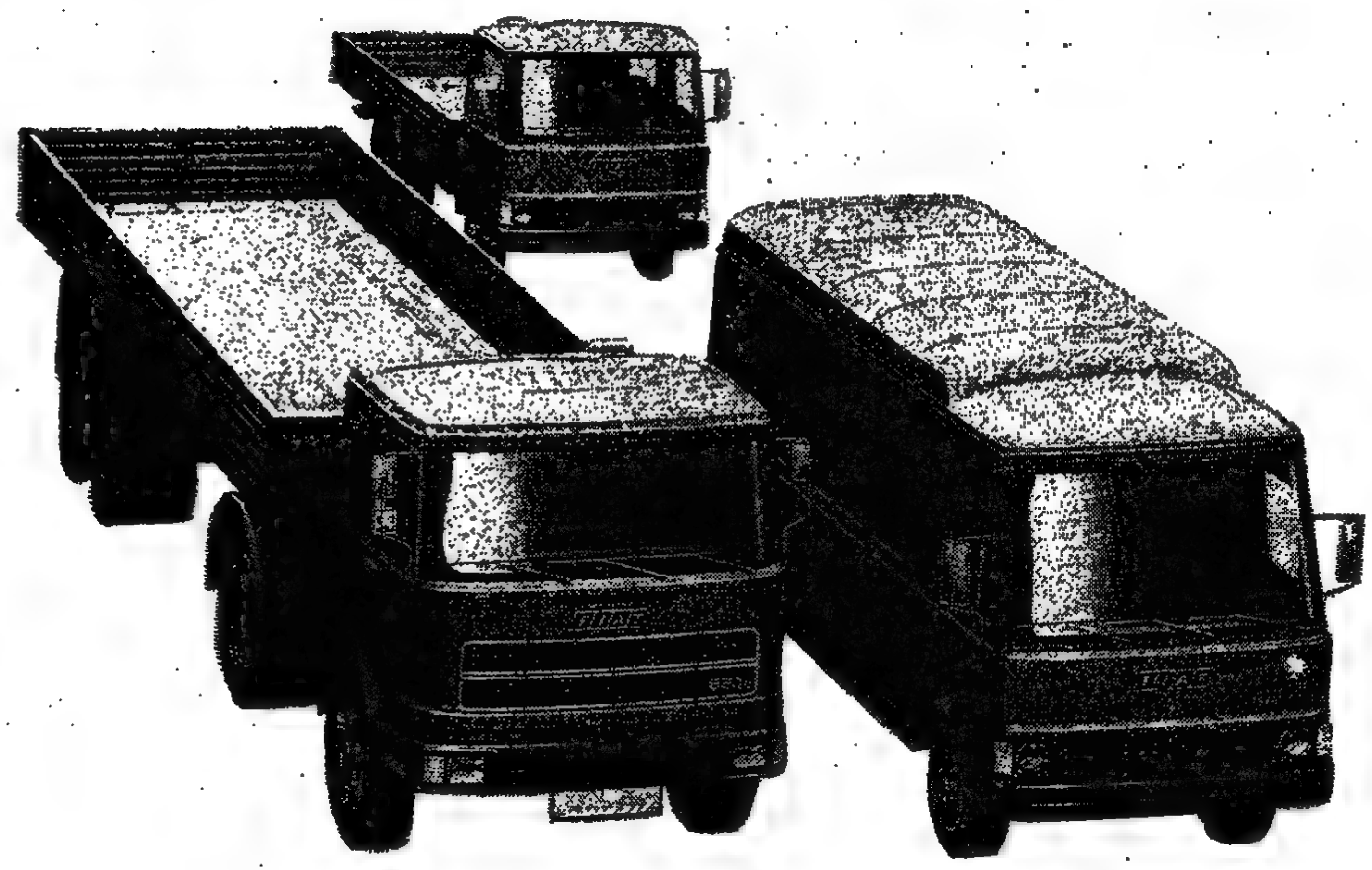
1971: Feb. 100; Mar. 101.09; April 102.73; May 105.75; June 108.00; July 107.24; Aug. 105.40; Sept. 10[...] Oct. 104.35; Nov. 105.48; Dec. 108.26.
1972: Jan. 109.18; Feb. 109.10; Mar. 109.24; April 108.04; May 109.36; June 115.97; July 111.97; Aug. 1[...] Sept. 112.14; Oct. 113.15; Nov. 11: 114.48; Nov. 18: 114.49; Nov. 25: 114.72; Dec. 2: 11[...] Dec. 9: 114.75; Dec. 16: 115.77.
1973: Jan. 117.56; Feb. 119.25; Mar. 120.53; April 123.80; May 125.27; June 128.81; July 127.64; Aug. 12[...] Sept. 129.39.

List of components of our Shopping Basket free on request from Room 101, Financial Times.

CINEMAS ARE CONTINUED ON PAGE 8



We're trading on the 70 years' experience of three great companies, now united under one banner... in Britain.



FIAT - OM - UNIC - who have long been leaders in the Italian and French commercial vehicle markets, have now merged into a single unit - the Fiat Commercial Vehicle Group - and offer unique advantages to operators in the transportation of both goods and passengers.

Now one single group, with its outstanding industrial resources, including the biggest factory in Europe for the production of medium-sized trucks, can supply tried and tested engineering in all areas — engines, gearboxes, differentials, suspension units, frames and cabs.
Not only does this offer design benefits, but also quality control. As a result of this merger we have been able to rationalize vehicle production and standardize most of our mechanical parts.
In short you benefit all round, through quality of product, first class service and parts facilities, backed up by 70 years of success.

FIAT Commercial Vehicle Group

Fiat (England) Ltd., Commercial Vehicle Division, Great West Road, Brentford, Middlesex TW8 9DJ. Telephone: 01-568 8822.

The Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

● RESEARCH

Giant pulse from fusion laser

RESEARCH at Sandia Laboratories, using an intense beam of electrons which pulsed a hydrogen fluoride (HF) laser to a new peak power level may have brought the production of energy from laser-induced fusion closer to reality.

Excited by a 2m. electron-volt beam, the laser produced a 55 thousand-millionths of a second pulse with a power output of about 4.000 Megawatts, or enough energy momentarily to light 40m. 100 watt bulbs.

This pulse is one of the largest ever generated by a gas laser and is some 45 times greater than the maximum energy level previously confirmed for an HF laser.

Experiments with the laser are a part of Sandia's research programme using lasers and electron beams to explore the feasibility of laser fusion to produce electrical power.

Laser-induced fusion, the object of extensive research in laboratories in the U.S. and abroad, involves the use of high-energy laser beams to generate heat which would fuse atoms of heavy hydrogen, releasing even greater amounts of heat for the generation of electricity.

The powerful Sandia HF laser beam was produced by firing electrons from an electron-beam accelerator into a tube containing a mixture of two gases—sulphur-hexafluoride, and ethane. This electron discharge resulted in the production of highly excited hydrogen-fluorine molecules possessing excess energy.

The molecules give off this excess energy in a concentrated burst of photons in the infra-red region of the spectrum.

In laser fusion, efficiency will be important and involves irradiating a pellet of deuterium-tritium simultaneously with multiple laser beams, squeezing the pellet to 10,000 times liquid density, leading to fusion of the deuterium nuclei.

It is thought that a laser-fusion power plant, using a laser of 10 per cent. efficiency, might require about 100.000 joules to produce a net energy of 10 per cent. But this is at least several decades in the future. The present maximum output of the Sandia laser is about 225 joules and the researchers believe that output can be boosted to well over 1,000 joules using one of the larger electron-beam machines on the site. However, it is not expected that the laser will be used in pellet irradiation in its present form.

The researchers believe that the present study has pointed the way to new lasers which will have better performance. The goal is to produce a short-wavelength laser capable of delivering 10.000 joules of energy in one thousand-millionth of a second. Giant electron beams, they feel, may be the best way to excite such a laser.

● MATERIALS

Expansion joint

BAKELITE XYLONITE'S Croydon-based Expanded Rubber and Plastics Division has developed a reinforced expansion joint filler and seal system known as "Evamex."

It is designed to eliminate the costly problem of alternate bay construction when laying concrete. Being self-supporting by virtue of its metal mesh reinforcement, it can be positioned and levelled in advance of the actual concreting.

The Evamex system is based on Evazote, BXL's expanded crosslinked ethylene vinyl acetate foam material. It allows a seal to be cast into a wet concrete surface where it will work in tension and compression, and removes the need for having to lay temporary fillers for expansion joints.

Protecting metal from corrosion

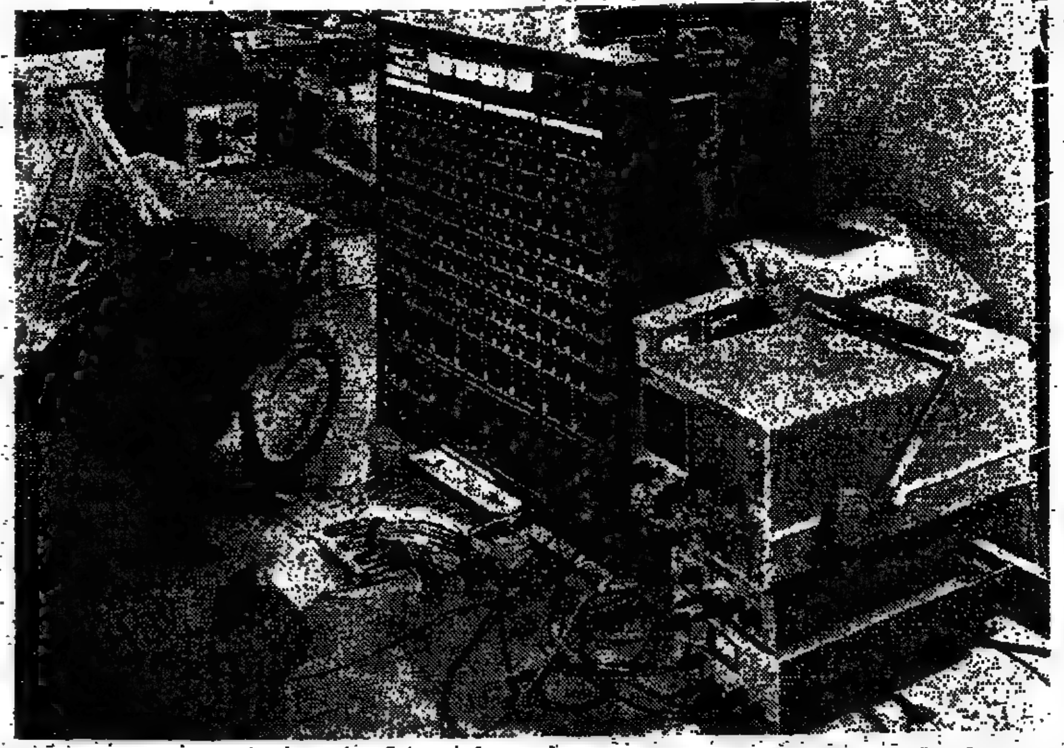
A TRANSPARENT, solvent deposited, hard film metal preservative is now available from the Industrial Division of Duckhams Oils, Summit House, West Wickham, Kent.

Known as "Solvakote Super," the pale brown preservative replaces four earlier grades: Solvakote HR, Solvakote HS, Solvakote Red and Solvakote Straw. Having a film thickness of about 15 microns, "Solvakote Super" can provide outside protection for up to eight months.

Surface drying time is about 30 minutes under normal ambient temperatures and in humid conditions, and a tack-free surface takes about 60 minutes.

● ELECTRONICS

Computers make computers in Galway



Looking for faults in computer circuit boards under a magnifying glass at the Digital Equipment plant in Ballybrit, Co. Galway.

THERE MUST be many manufacturers who would think twice before setting up a high-technology plant out on the West coast of Ireland, with no pool of experienced labour, rather rudimentary communications and something of a remoteness from the appropriate market areas.

But Digital Equipment Corporation, headquartered in Maynard, Mass., took the plunge and last week officially opened a 130,000-square-foot plant at Ballybrit, Co. Galway, now employing nearly 600 local people. Based on similar experience of plants in Puerto Rico and Taiwan, DEC vigorously set about training its local labour force, and last year, including machines from its original old plant, one thousand minicomputers were shipped from Galway.

The answer to such productivity lies in five aspects: the Republic's government have prepared the way, with local government; the most modern computer-controlled production facilities were installed from the start; wage rates for the girls on the shop floor start from £12.50 per 40-hour week; Shannon airport is about an hour away by road; and above all, perhaps, labour poaching by other companies is almost zero—there is only one other electronics plant within striking distance.

All this is perhaps worthy of note by businessmen thinking of starting something in, say, the North London surburbs.

The Galway plant proves demonstrably that high-technology, high value per unit volume products attracting only reasonably low transport costs for both incoming and outgoing items can operate successfully in such areas. To date, however, DEC is the only computer manufacturer in Ireland.

Production at Ballybrit includes the PDP-8 and PDP-11 minicomputers, tape reader/punches, display terminals, disc and tape controllers and memory systems.

The significant feature, however, is that the whole of the production set-up is "managed" by the company's biggest machine, a PDP-10. This takes care of much of the administration of production which would otherwise take the form of more paperwork than is actually the case. Operational analysis is a further benefit. There are another 15 of the company's minis employed on the lines, mostly in test, inspection and system check-out.

Automatic insertion of resistors, capacitors and integrated circuits followed by flow-solder techniques are normal enough but one could not walk far round the plant without encountering the interesting if eerie sight of a PDP series machine checking a recently manufactured duplicate of itself.

GEOFFREY CHARLISH

● SAFETY

Experts to assess fire risks

DRAMATIC consequence of fires in public places need no underlining. They have confirmed the imperative requirement to take more positive steps to reduce such hazards to the lowest level which modern science can achieve.

Yarsley Testing Laboratories, a division of Fulmer Research Institute, has operated a comprehensive facility for fire tests in accordance with British Standard B.S. 476 and other specifications, including some European and American. This has given them unique experience of the performance of materials under fire conditions as apply in buildings and all places where people gather, as well as road vehicles and ships.

An important extension to this service just decided on, is a new department formed to consider other aspects of fire hazards, including *ad hoc* tests on actual structures and installations in order to demonstrate the fire risk they present, if any.

Also a large variety of fire and related tests beyond the scope of British Standards will be carried out where required. An example is ball valve testing to the Oil Companies' Materials' Association specification governing mandatory acceptance tests for fire safety.

In addition to manning the testing facilities, Yarsley staff are always available to visit sites to undertake investigations, select samples and make on-the-spot assessments. Research projects aimed at understanding the factors controlling the initiation and spread of fires will also be carried out.

To head this new department Mr. R. C. Bishop, who for many years has been engaged in investigating fires and explosions and researching into their causes, has joined Yarsley Testing Laboratories.

The laboratory facilities available in the Fulmer organisation, including a comprehensive range of chemical, mechanical and physical testing units, are believed to be unique in Europe.

Yarsley operates from The Street, Ashtead, Surrey.

Inert foams make repair work safer

WORLD-WIDE joint safety foam services to industry to cover land-based applications as well as ships and vessels in dock are to be provided by the British Oxygen Company and John Kerr and Company (Manchester), of Liverpool.

BOC is setting up a fully mobile contracting operation using John Kerr's foam inerting and blanketing process.

The Kerr nitrogen foam process, with patent applications filed in the U.K. and overseas, is the outcome of a three-year development programme. It has opened up a completely new market and complements BOC's conventional nitrogen purging and hot inert cleaning businesses.

The technique provides protection through densely packed nitrogen-filled bubbles in the form of a thick foam which is injected into the free space of tankers, storage vessels and installations handling or storing inflammable or dangerous chemicals. These may be liquids or gases, particularly hydrocarbons.

Welding, cutting and other external hot-work treatment can be performed safely on tankers and other such units without the need for complete internal cleaning. British Oxygen says. This would cut considerably the down-time of such tanks and installations needing repair, as well as the time taken over safety precautions and preparation before cutting for dismantling, removal or disposal.

● PETROLEUM

Oilfield water injection

HICK Hargreaves and Co., member of the Electrical and Industrial Securities Group, has extended the application of its deaeration know-how into oilfield waterflood systems. Appropriate new processes and designs of deaeration systems have been patented.

Hick Hargreaves has been a large supplier of deaeration plants—mainly for water—for over twenty years. The trend in development has been to instal plants to work at increasingly high temperature and pressure levels in line with the developments in modern boiler technology. Oil production techniques pose completely different water deaeration problems. To maintain certain types of oilfields at optimum pressure, water is injected to replace the oil as it is extracted. This water has to be deaerated to a very low oxygen content, particularly in offshore systems where seawater is used. The problem has been to develop really effective low-cost deaeration systems to handle cold, salt-laden, waters which often have a pronounced tendency to foam.

Various new designs specifically adapted to the special circumstances of each oil rig are in hand. For certain Middle Eastern locations the company is providing multistage vacuum deaeration systems which achieve an oxygen content as low as 0.02 parts per million, and cannot be adversely affected by foaming or incorrect liquid distribution as are conventional packed tower systems. In other North Sea applications plants incorporating natural gas stripping are being adopted.

For oil rig applications, ease of erection and continuous, automatic maintenance-free operation is essential. The composite Hick Hargreaves water flood systems are skid mounted, incorporate simple control systems and novel but well-proven special anti-corrosive linings.

Hick Hargreaves, Soho Ironworks, Crook Street, Bolton BL3 6DB.

● PRODUCTS

All purpose sprayers

THE DORMAN Sprayer Company of Ely, Cambs., is introducing a new range of trailed/skid-mounted, engine driven horticultural and general purpose sprayer units. No pto or 3-point linkage is required for operation.

There are four chassis-mounted models with capacities ranging from 44 to 110 gallons. Each can be supplied as a complete trailed unit or with skid boards for mounting on to any flat-platformed vehicle, or on to a trailer. The smaller models can be equipped with a handle-bar for manual propulsion from one working site to another.

The spray boom or hose reel mounting can be attached to the front or rear of the chassis assembly according to spray application requirements and the 100 feet hose reel attachment enables spraying of areas inaccessible to a vehicle such as flower beds and orchards.

Sensitive valve actuator

NEW from the Schrader Fluid Power Division, Cannock, Staffs, is an ultra-sensitive actuator, which extends the flexibility of the company's ⅛ inch midget spool valve range.

Developed specifically to cater for the increasing number of advanced pneumatics applications which require a very sensitive trip action, it has a wire sensor or "whisker" to operate either three-way or four-way spool valves of this kind.

The wire sensor is normally part of the valve but it can be removed from its housing and attached to the end of a nylon tube. Providing the tube is no longer than 12 inches, there is very little difference in the valve response time. It can also be bent or formed by hand to enable it to be fitted into a confined space or triggered by awkwardly-shaped components.

● OFFICE EQUIPMENT

Sideways calculator launched

MOST MARKETEERS are agr[...] that since many consu[...] products—petrol, oil, deterge[...] are good examples—cannot[...] altered much in terms of th[...] function and basic composit[...] all one can really do is to a[...] the package or the exte[...] appearance in order to try[...] get some sort of edge on[...] competition.

This may have been the th[...]ing behind the latest Sh[...] calculator, in which one[...] mildly surprised to find [...] rows of keys and the dis[...] running parallel to the lon[...] dimension of the case.

The display is to the left[...] the keyboard and is unusua[...] having only three digits [...]played sequentially four ti[...] to accommodate the 12-[...] capacity of the machine. [...] sets of three digits are flip[...] over by key depression but th[...] is also an automatic cha[...] switch which electronic[...] rotates the displays at "[...] reading speed."

Low price

The machine, the Sharp EL[...] is being marketed in the [...] by Bosco, of S. White [...] Parade, Sevenoaks, Kent, [...] of the Thorn Group. An ide[...] the marketing approach is g[...] by this paragraph from the [...]licity material: "At £23.5[...] matches in price so many o[...] good-quality Xmas pres[...] that fond parents give to t[...] children, and Bosco fore[...] this being a popular and hi[...] worthwhile stocking filler [...] year as the EL 120 is ideal [...] homework, schoolwork, ho[...]hold bills and as a shop[...] aid."

It is claimed that the ab[...]viated display is no prob[...] because following the first th[...] digits to appear are one or m[...] commas indicating how m[...] more groups of three hav[...] be called up to get all the fig[...] of the answer. There is al[...] counting key on the side of [...] machine which simply incre[...] the display by one each tim[...] is pressed—a useful featur[...] stock checking.

The calculator measures [...] 2¼ x about ½ inch, and we[...] under 7 ounces.

The display arrangement[...] the machine are interesting[...] that they are clearly a [...] cutting exercise at the exp[...] to some extent of conveni[...] of use; on the other hand[...] machine offers twelve digit[...]

Fewer buttons

The "rotate" effect [...] display could just as easily[...] applied to setting up the [...]culation in the first place [...] it is likely that before [...] machines will appear in w[...] the numeric buttons zero to [...] are done away with to re[...] both cost and, more import[...] volume. A single numeric bu[...] would be held down to c[...] the digits at a convenient s[...] and released when the requ[...] digit is displayed. The remai[...] of the digits in the num[...] would be set up similarly[...] sequence.

Such a degree of inconveni[...] might be acceptable becau[...] very compact, possibly sq[...] calculator could result and, [...] semi-conductor chip p[...] falling and mechanical assem[...] costs rising, the "matchb[...] calculator might be in sight[...]

GEOFFREY CHAR[...]

Building and Civil Engineering

arnstaple to get new hospital

EY COLES, an associate ny of Marples Ridgway in ath and Portland Group, een awarded a £5.38m. con- to build the 362-bed taple Hospital for the South Regional Hospital Board.

n completed in 40 months, taple will possess one of est equipped hospitals in outh West. It will have perating theatres, an inten- are unit, and an accident mergency department with inor theatres. There will e a 10-bed isolation unit 10-bed day hospital with t-patients department.

addition to the general there will be specially ed wards for surgical, tric, geriatric and psychiat- re.

sulting engineers on the t, which will cover an area most 28,000 square metres, be Clarke, Nicholls and l, with quantity surveyors ng and Hope.

wers for lford

Buchan and Company has £1.78m. contract from Tel- Development Corporation e construction of sewers for rthern part of the town.

The sewers are essential before any large scale development can begin in the north, while a big scheme has already been completed to facilitate fast development in the south of the designated area.

Meanwhile, Southern Construction (Holdings) has been awarded a £1.15m. contract by Fareham Urban District Council for the construction and commissioning of partial treatment works and an administration building for first stage of the Salterns Lane Sewage Treatment Works.

Brims wins Newcastle contract

AN OVER £1m. contract for the redevelopment of a commercial site in Newcastle upon Tyne city centre has been awarded to Brims and Co. by North British Properties.

The project, which is part of NBP's current £5m. commercial investment programme, is in Fenkle Street and includes a ground and lower ground floor retail area of 37,000 square feet, three floors of offices totalling 24,000 square feet and car parking for 450 cars.

Brims, whose contract involves design as well as construction, has commissioned Ryder and Yates and Partners to carry out the architectural design work. Work on site is planned to commence this year and will take at least two years to complete.

Partnership in Belgium

U.K. CONSULTING engineers Bylander Waddell Partnership have formed a working partnership with Bureau d'Etudes Louis Culer of Brussels in order to offer comprehensive consultancy services to British clients and developers investing in Belgium.

The bureau of Louis Culer has been responsible for consultative services in the fields of structural engineering and environmental services for offices, hotels, housing and industrial projects since its formation in 1956.

It is intended that the new partnership, which will practise under the title Bylandor Culer Partnership, with offices at 84 Avenue des Gloires Nationales, 1080 Bruxelles, will draw on the resources of the respective individual offices in their own countries.

Seminar on timber frame

CHIEF EXECUTIVES of 38 companies in eight European countries, all with interests in timber engineering techniques for house construction, are to-day attending the first day of a six-day seminar on timber frame construction being held in Montreal, Canada.

The conference is being sponsored by the Campeau Corporation, Ottawa, and the Department of Industry, Trade and Commerce of the Canadian Government.

Delegates will be studying new flow-line methods as a contribution in the production of timber frame houses, learning of a high-speed computer system to serve Europe on roof truss design and discussing ways and means of introducing these latest machine units into areas where there are housing shortages.

The European office of TCT Engineering, a division of the Campeau Corporation, was one of the organisations which played a part in the Igny Project near Paris, a scheme developed by the French and Canadian Governments whereby 114 houses of 10 different models were built by Canadian timber frame methods.

Southwark scheme by Murphy

A £3.4m. development in Silwood Street, Bermondsey, is to be carried out by J. Murphy and Sons, part of the London and Northern Securities group, for the London Borough of Southwark.

The scheme involves the construction of 14 blocks of flats ranging from three to six storeys, together with basement car parks and a communal hall for tenants. The 300 units will include 32 old peoples' flats.

Architects Stock Page and Stock are supervising the development which has a scheduled completion date of 33 months.

Safety and health at work

THE INSTITUTION of Civil Engineers welcomes Government proposals for a single Commission and Executive to administer legislation on safety and health at work, but thinks that Construction should be made a separate division of the Executive.

In a letter to the Department of the Environment, the ICE says that the inspectors in such a division should be highly qualified professional engineers.

"It is important there should be a reasonable degree of independence for the various specialised divisions forming part of such an Executive, and the Institution endorses the view that the special expertise of the existing Inspectorates should be preserved," the letter reads.

The ICE agrees that a Safety and Health at Work Bill should apply to all employment including self-employment and make provision for the protection of the public in the neighbourhood of the activities covered.

Myton wins P.O. job

MYTON, a member of the Taylor Woodrow Group, has received a £980,000 contract from the Post Office, Midland Region, for the design and construction of a two-storey letter sorting office and a four-storey administration block in Peterborough.

The work is due for completion by the end of February, 1975. Architects are Twist and Whitly with Ove Arup and Partners consulting structural engineers.

Myton has also won a contract, worth £260,000, from Babcock and Wilcox, for the construction of a three-storey office building at Spurgeon Street, Southwark, London. Architects, quantity surveyors and structural engineers for the project, which is expected to be ready in December, 1974, are Moxley, Jenner and Partners.

Pipeline to Great Cumbrae

NEARLY 7,000m. of 150 mm concrete-lined ductile iron piping will be used at the landward ends of a new underwater pipeline to be laid soon by the Ayrshire and Bute Water Board to improve water supplies to Millport on the holiday island of Great Cumbrae.

Situated off the coast of Ayrshire opposite Largs, Millport has suffered from a water shortage for a number of years, but this has recently become acute —so much so that on occasions water has had to be shipped there.

The overall scheme includes the building of a new service tank on the island and this will be fed under gravity from an existing reservoir on the mainland. A considerable part of the landward pipeline, particularly that on the island, will be laid in rocky terrain.

Farms and other properties on the route of the pipeline will be supplied with water from the public supply for the first time.

Concrete Society award

APPLICATIONS ARE invited for the Concrete Society Award for Innovation in the field of concrete and concrete construction, which was instituted in 1972 and is again being offered in 1974.

A condition of entry is that the innovation must have had its first significant application within the three years preceding the last date of entry for the 1974 award (October 31, 1973) and submissions may only be accepted which may be inspected in the British Isles.

Nomination forms and full details may be obtained from the Secretary, The Award for Innovation, The Concrete Society, Terminal House, Grosvenor Gardens, London SW1W 0AQ.

PIPEJACKING

Hopes for a breakthrough

TUNNELLING IS currently a booming sector of the civil engineering industry and if recent forecasts are anything to go by, the situation is unlikely to change over the next 30 years.

A market picture prepared by the Transport and Road Research Laboratory and the Building Research Establishment gave the following estimated future mileage of tunnelling, including sewers, water, cables, railways, roads and gas:

In the next five years, 599 miles; in the medium term (five to 15 years), 1,560 miles; and in the long term (15-30 years), 2,540 miles.

However, a major problem is, and will continue to be, finding enough labour of the right quality prepared to carry out the work—there are already several tunnels under construction at the present time whose faces are unmanned.

Better method

One solution to this problem is to employ a neater, cleaner method of construction involving the use of fewer skilled operatives, with less physical demands.

Such a solution over the increasingly popular range of tunnel—three to seven feet in diameter—could be pipejacking. Although not a new industry, and one that at the moment has an annual turnover of about £8m., member companies believe the market is virtually untapped.

Pipejacking may be defined as a method by which large-diameter pipes (steel or concrete) are jacked through the ground, the displaced material being excavated at the face of the shield and removed back through the pipeline to a thrusting pit. It is similar to shield tunnelling in that all steering of the line after initial entry into the ground is carried out by means of adjustment to the shield preceding the leading pipe.

Design advantage

Apart from the advantages implied earlier, pipejacking offers a complete homogeneous pipe which, in certain instances, also possesses a design advantage. With reinforcing steel around it, the pipe is built to take the total load in itself, regardless of anything outside it, and under a railway embankment for example, where side support is not particularly high, the pipe installed by pipejacking will take the whole deadload of the embankment.

Obviously the method has its limitations. Because of frictional build-up, there is a limit to how far one can go before having to drop another shaft. In segmental tunnelling, it is only the shield which is being moved forward whereas using the jacking method, it is the whole pipeline. On the other hand, with sewer and service tunnelling, there is normally a restriction on the length from one manhole to the next.

Pipejacking was, in fact, first done by the Americans at the end of last century, just for odd crossings. The method then drifted across to Europe but never developed with any purpose in the U.K. until about 12 years ago, when two companies started up—William F. Rees, which bought the idea from a Swedish company, and Tube Headings.

Rees set up an extensive selling campaign, going to local authorities, putting on demonstrations, taking space in public works exhibitions and so on. The trouble was that this campaign was too successful. Unusual for the civil engineering industry, the method offered attractive margins with little initial outlay, and the result was a lot of non-experts jumping on the bandwagon.

A classic situation then arose —after about 30 companies started cutting each others' throats, prices started to slip. The unprofessionals went out of business, but the professionals suffered heavy losses on a large turnover because of under-pricing. Not unnaturally, engineers became disillusioned with pipejacking because "cowboys" messed up so many jobs.

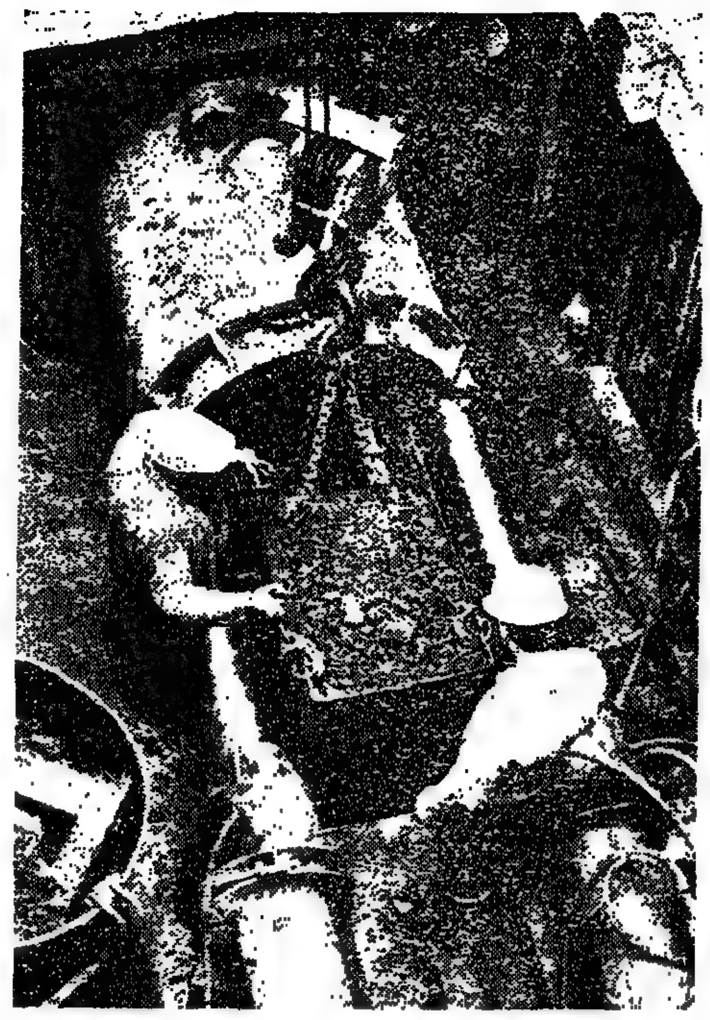
New association

Seven companies—Rees-Hough, Biggs Wall, Delta Construction, Miller Bros. and Buckley, M & H Tunnel and Civil Engineering, Tube Headings and T.W. Mechanical Headings — will be announcing on October 1 the formation of an association, whose aims will be to re-promote the image of pipejacking, to ensure high quality work and to further educate engineers about its applications. Mike Hough, chairman and managing director of Rees-Hough, will be chairman of the new association.

Limited research is at present being channelled into pipejacking because the companies involved are small and simply do not have the resources. However, the industry believes that there is great potential for developing the technique and points to the Germans who carry out very sophisticated pipejacking.

Maybe large U.K. civil engineering groups will eventually enter the market with the necessary cash to back it.

JOHN DARLINGTON



Using the pipejacking method of tunnelling, steel or concrete pipes are hydraulically jacked through the ground after the excavated material at the tunnel face has been removed back through the pipeline to a "thrusting pit."

Visit to Berlin

THE INSTITUTE of Building is organising a visit to Berlin next March 1-4 with a programme that will include technical and sightseeing visits to both the eastern and western parts of the city.

The number of places is strictly limited, with allocation on a first-come, first-served basis. Application forms are available fom John Overton, Director of Activities, The Institute of Building, Englemere, King's Ride, Ascot, Berks.

IN BRIEF

The Government of Trinidad and Tobago has awarded a second contract, worth £1.7m., to George Wimpey (Caribbean) for the Solomon Hochoy Highway between Chaguanas and San Fernando. The contract is for surfacing 14.2 miles of the southbound carriageway.

Work has begun on a £378,000 conversion programme to accommodate the Concorde airliner in the British Airways overseas division hangers at Heathrow Airport.

Cementation Construction is to improve a section of the Swansea-Manchester trunk road (A56) through Stretford, Lancs, at a cost of £676,000.

Further council housing development for the London Borough of Harrow will be carried out by John Laing Construction under a £690,000 contract for 72 dwellings and a children's community home.

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MONDAY SEPTEMBER 24 1973

Heavy going in Nairobi

THE FACT that the Group of Twenty has had to report an almost total lack of progress must disappoint even the most modest hopes which had been pinned on the annual meeting of the International Monetary Fund, which opens in Nairobi to-day: and the prospect of a further year of confused indiscipline in currency markets must be discouraging and somewhat alarming to the business community. It is discouraging, too, for the EEC, whose effort to create at least a limited area of relative stability is now on the critical list. The prospect of Britain joining the EEC joint float, should it survive, is now more remote.

Dangerous

Delay, then is dangerous; but not, perhaps, as dangerous as an attempt to agree on a "reform" which would leave the fundamentals untouched. The failure of the Group of Twenty is partly due to insistence on those fundamentals, and affords an opportunity for the Nairobi meeting to re-state the essential requirements of a reformed system—the agenda for the decisions which must now be taken before the end of next July.

The conditions, as laid down by the principal disputants, are simple but contentious. The Americans demand a system which will impose equal disciplines and afford equal adjustment opportunities on all countries, whether in surplus or deficit. This principle is now widely agreed, the means through which it should be embodied are not. The American stress is on automaticity—the notion that a change in reserve holdings outside an agreed limit should automatically impose an obligation to negotiate a change in exchange rates or domestic policies. The EEC powers regard this as too simple, and argue that the criteria should be based on a full economic assessment, and not on a simple change in reserve holdings.

So far as this argument has any substance—and the Americans insist that their automatic signals would only serve to set international consultation in motion, not to dictate a decision—commonsense argues for the EEC view. Recent British experience shows vividly enough how violently the balance of payments can swing—and in the "wrong" direction. The pound was probably overvalued when we were in large surplus, and is undervalued now.

It is also hard to sympathise with the U.S. on the second basic dispute inside the Group of Twenty. It is agreed that a basic objective of reform is to establish proper control over international liquidity, and to ensure that its level neither depends on nor can be created by the balance of payments deficits of one or two countries. This objective is simply not compatible with U.S. insistence that surplus countries should be left with a free choice of whether to hold their reserves in the international medium or in national currencies. There is room for legitimate dispute on how far existing currency balances should be consolidated—on what is an appropriate level of "working" balances, and how big a Eurodollar market should be to assist the international mobility of funds without creating dangerous inflationary and speculative strains. But international control is essential.

Essential

At this point, however, the less developed countries can demand to be heard. Their support is essential if international control is to work (their present practice of re-depositing borrowed currencies in the Euro-markets is a major cause of their uncontrolled growth); and they require an alternative source of development capital, through a link between reserve creation and aid. Some EEC members still argue that a system in which the developed countries would have to earn any increase in reserves—and to earn the net surpluses which reserve creation implies—would be inflationary. They must remember that uncontrolled creation of liquidity, both earned and unearned, is still more inflationary. The demands of the third world will have somehow to be met if a workable system is to be created, and the division of the world into currency blocs avoided: and it is the third world especially that sees in Nairobi an opportunity to assert its case.

The growing impact of steel shortages

WHILE THE latest unemployment figures and the rise in unfilled vacancies provide further evidence of overheating in the economy, another indication is the growing list of industrial materials where acute shortages have begun to develop. The shortage of steel, as a report on page six makes clear, is a worldwide phenomenon, but several factors have aggravated the position in the U.K., not least the strikes which have occurred in several of the British Steel Corporation's biggest plants. Despite these difficulties the BSC has managed to increase its output by around 10 per cent. so far this year, but this is not nearly enough to satisfy the market.

Rebuilding stocks

The extent of the shortfall is difficult to assess partly because many customers are double-ordering, but it is clear that the sharp revival in steel consumption together with the rebuilding of stocks by steel-using industries has created a demand which is beyond the current capacity of the BSC.

A supplementary factor has been the changing price relationship between British and imported steel. In the past certain grades of steel, such as reinforcement bars, have been imported at prices well below the BSC's levels and have accounted for a substantial share of the several years to show results in terms of increased capacity. Indeed the disruption inevitably caused by plant closures and rationalisation could lead to temporary reductions of capacity in one or two areas. The current situation of under-supply is largely a reflection of the very low level of investment in the British steel industry during the last few years.

A modest amount of relief may be obtained as teething problems in certain plants are ironed out and the process of "de-bottlenecking" continues. But in general it seems that a significant expansion of capacity for the products which are now in short supply cannot be expected much before the end of 1974. Since it looks likely that most of the other major steel industries of the world will be at full stretch at least for the first half of next year, the shortage of steel could well become a more serious brake on output in the months ahead.

Exports

Among the industries worst affected so far are construction, domestic appliances, and parts of mechanical engineering. The last of these is particularly important, since the industry plays such a key role in the country's exports: quite apart from the steel shortage, many firms in the sector are so hard pressed to satisfy home demand that they have no resources

Chrysler: past causes of present troubles

BY JOHN ELLIOTT, LABOUR EDITOR

Against the background of growing suspicion that Chrysler might actually be serious about pruning its U.K. car manufacturing operations because of continuing labour troubles, a flurry of activity in the past couple of days has raised some hopes that the company's immediate crisis may be past.

To-day Chrysler's Linwood plant in Scotland reopens, preparing motor bodies and transmission equipment for the company's Coventry plants. As a result, these should be able to reopen when they return from a week's holiday next Monday. With cars flowing again off the production line and providing much needed cash, Chrysler could end its talk of crisis and carry on as before.

The main question this morning, as Chrysler executives prepare for their meeting with national union leaders to-night, is whether the labour troubles and cash problems this time are so serious that life will never be the same again.

Left, Mr. Peter Griffiths, Chrysler's industrial relations chief. Right, Chrysler strikers earlier this year.

Three main unions

A significant part of the answer to this depends on whether to-day's meeting cracks the basic dispute over electricians' pay at Chrysler's Ryton and Stoke plants in Coventry, and on whether the leaders of the three main unions involved in the affair—the Electrical and Plumbing Trades, the Transport and General Workers, and the Engineering Workers—all prove willing to help Chrysler out of its troubles.

Chrysler's labour relations have been showing all the signs for the past few months, if not for the past couple of years, of being far from healthy. The current electricians' pay dispute and the wider industrial action which has resulted in Scotland contains many of the ingredients common to many labour disputes, especially in the motor industry.

The company is in poor financial shape. American owned, with suspicions that its Detroit headquarters is dictating a hard and unsympathetic labour relations line. The company's wage arrangements and structures are out of date, with too many individual negotiations for different plants and different groups of workers. A day-work system, which replaced piecework a few years ago, is said to be showing signs of strain, and management have started injecting a bonus element to boost output.

There are wage differential problems, with elitist claims from craftsmen stirring up already active inter-union rivalries. The national leaders of the unions involved choose their tactics with at least one eye on their own internal and political problems. On top of all this, there is a statutory pay policy curbing freedom to deal with wage structure problems, and there is a management torn between all these different pressures and making day-to-day decisions which sometimes both it and its critics later recognise to have been wrong.

Unused to militancy

The electricians in Coventry who have now been on strike some seven weeks, are a far from militant bunch. They are said not to have had a strike for some 30 years, and are now acting like men unused to militancy—for example, showing no interest in conciliation. They have total official support from their union, which can easily afford generous strike pay for such a small group. Its president and general secretary, Mr. Frank Chapple, may not mind being seen to be militant with a handful of his members, given that he faces serious Left-wing pressures elsewhere. In addition, the electricians' case is absolutely in line with a 14-year-old policy of the union that no engineering worker must be raised to pay rates above those of electricians.

The elite of the motor industry are the toolmakers whose skills, the electricians claim, are declining with increased technology. In the Coventry area, until two years ago almost all the city's toolmakers' high rates were guaranteed by a special system linking them with the pay of production workers. This is the key to the start of the current electricians' dispute. Way back in 1965, Chrysler (or Rootes as it then was) agreed that the electricians' pay should be directly linked to the toolmakers' agreement.

This was the first time that the electricians had demanded special treatment — treatment they are striking for to-day. In 1968-69 Chrysler moved from piecework to measured day-work. But the AUEW refused to ratify the deal and as a result the company, in top secret and literally behind locked doors, negotiated a special extra for the toolmakers which yielded roughly £1 a week.

This was paid out in an annual lump sum, and the deal remained a secret till money was first paid out in mid-1970. The electricians then complained, but followed their traditional non-militant stance when the management said that the toolmakers might agree to give up their special payment. A year later, in 1971, when annual pay negotiations came round again, the electricians again lodged complaints—but the situation was confused by the Coventry toolmakers' arrangements being terminated.

Toolmakers' super-grade

Again, Chrysler gave in to the toolmakers and maintained their special payment even though the general Coventry deal against which the payment had been calculated had disappeared. Troubles spread last year with the TGWU at Ryton refusing for a time to sit in negotiations alongside the AUEW to which the toolmakers belong (it is not only the electricians who resent the toolmakers). In an attempt to deal with these problems, the company thought of creating a new super-grade for the toolmakers and an undefined number of other craftsmen—including the electricians—who would be paid a higher basic rate than the rest.

In the event, the bonus scheme was partially introduced in the company's general 1972 pay deals and the toolmakers went on to win a £2,500-a-year staff status pay deal just before last November's freeze started.

The electricians however had refused to negotiate at all before they saw what the toolmakers had got, and their eventual similar £2,500 deal—giving rises of about £6 a week—was stopped by the freeze.

Pay Code limit

At the end of the freeze on April 1 they received £2.68 a week—all that was allowed under the £1 plus 4 per cent. rule—backdated to last October. Then came the question of this year's pay deal—also subject to the £1 plus 4 per cent. limits. The electricians swear that, at a meeting in February at its Knightsbridge headquarters, Chrysler promised to pay the "maximum possible" under the Government's policy.

The Pay Code lays down a top limit on the £1 plus 4 per cent. calculation of £250 a year. The current strike is over whether the company was promising £250 or the maximum £1 plus 4 per cent. calculation on electricians' pay—which would be less than £250. The company is refusing £250, which it says it never promised, could not get past the Pay Board, and could not afford to pay because it has been told by the TGWU and AUEW that it would face consequential claims from other groups of workers.

The company is sticking at £190, which would raise the electricians to their previous Grade A levels. But the company has also withdrawn the electricians' staff status scheme with its £2,500 annual salary which the electricians had assumed would be implemented when Government policies allowed. Faced with the threat of counter-claims from other craft grades, the company says the electricians must re-negotiate this along with other craftsmen.

This has soured the atmosphere even more, as has the issue of management staff—and maybe some manual workers in Coventry belonging to other unions—doing the electricians' work. It is this issue of "blackleg labour" that led to all Linwood manual workers walking out two weeks ago, stopping production of motor bodies and so leading to the Coventry shutdown.

Throughout this saga, Chrysler's management is open to criticism for its tactics—such as dealing in secret with the toolmakers, then dealing alone with the electricians on a staff status claim, and finally for agreeing staff status and then withdrawing it. Unhappily, this sad saga has come to the crunch only a few weeks after the "shoddy work" dispute in June which was an example of the management feeling it had t[o] stand out against unconstitu[tional] demands following fi[ve] years or more of giving wa[y] to shop floor pressures.

Many of these problems ste[m] from last October when Chry[s]ler, in the face of boomi[ng] demand for its cars, wanted [to] raise the Avenger range pr[o]duction rate at Coventry fro[m] 3,000 to 3,500 cars a week. [In] line with its agreements, [it] started talks on manni[ng] arrangements with its sh[op] stewards who amazingly did n[ot] reach agreement till Decembe[r]. Chrysler's trouble spot is [the] Ryton body shop which fail[ed] to meet the new 3,500 standar[d] without excessive overtime a[nd] disputes. Finally, union offic[ials] moved into the plant full tim[e] round the clock for a week [or] so, and sorted out the stewards' problems wh[ile] management did a simil[ar] exercise with its shop-fl[oor] management. As a result, fr[om] March to May, in the view [of] management, there were t[he] best shop-floor attitudes, re[la]tionships and output for a lo[ng] time. But all this was ruined [by] the "shoddy work" dispute. [The] blunt management hard li[ne] during this dispute led to [in]creased suggestions of Detr[oit] domination causing a "make [or] break" policy.

Tight financial brief

In fact, Mr. Peter Griffit[hs], Chrysler U.K.'s industrial re[la]tions director, was in Detroit t[he] day the "shoddy work" stri[ke] started. It was his regular vi[sit] to discuss with the America[ns] how he planned to handle [the] 1973 wage negotiations. Chrysl[er] insists all this was simply [to] inform the U.S. parent rath[er] than to receive instructio[ns]. Despite the fact that the U.[K.] management are in regu[lar] contact with Detroit—especia[lly] at present — Chrysler tries [to] explain its freedom by pointi[ng] to its brief, which is to finan[ce] future U.K. investment with [its] own profits.

It is this tight financial br[ief] which is worrying the U.[K.] Government and union lead[ers] because, at the £1m. a day [loss] of revenue suffered last w[eek], Chrysler's cash reserves [and] credit facilities could not co[n]tinue indefinitely. When t[he] money runs short, there is [no] guarantee that Detroit wo[uld] step in. It is in this context t[hat] Chrysler has been talking abo[ut] cost savings, initially throu[gh] lay-offs and redundancies, [and] later perhaps by selling off so[me] of its operations — say, co[m]ponent manufacture or a facto[ry]. None of this might prove nec[es]sary if the situation improv[es] this week—but it is too ea[rly] yet to accuse Chrysler of cry[ing] "wolf" once again.

MEN AND MATTERS

While Gulliver talks to RCA . .

What would mighty RCA Corporation, turnover approaching $4,000m. a year, want with tiny Oriel Foods, capitalised at only £6.8m. even after the shares had moved up 10p last Friday? Where does James Gulliver fit into the house built by David Sarnoff — the young man who picked up the first radio messages from the sinking Titanic and went on to father American television—now succeeded at RCA by his son Robert Sarnoff? How does wholesaling food go with RCA's existing British activities, things like servicing parts of our defence early warning system, running Hertz car hire and, in partnership with Thorn, owning the factory which turns out more colour TV tubes than anyone else in Europe?

Perhaps no one knows all the answers yet, for yesterday both sides were still at that stage of negotiations when they like to indicate that there are other irons in the fire. Had RCA had talks with other European food groups? "I'm not prepared to answer that," said its spokesman. Had Gulliver had other offers? "I'm not going to comment on that, because one question leads to another and that's a road I don't want to go down," he said.

RCA, whose main earnings products throughout the U.S. and Canada. Would RCA really be trying to enter the food production business in Britain? "Traditionally, in all fields, we are manufacturers," was the guarded answer.

Oriel's Gulliver, 42, is best known as a marketing man through his build-up of the Fine Fare supermarket subsidiary of Associated British Foods. But earlier this year he said that the plan for Oriel was a group operating in food manufacturing, food distribution and also in certain sectors outside the food industry (the absence of food retailing from the list might be explained by a parting agreement with ABF that he should not return to the retailing side before early 1974). So RCA's plans could fit neatly enough with his, but for the personal factor: Gulliver left ABF because "I feel the time has come to face the new challenge of launching out on my own."

Goldsmith links with Unigate

James Goldsmith, whose ambitions in food seemed not so long ago to be at the same embryo stage as James Gulliver's, has gone into partnership with Unigate, albeit in a small way, through a deal just announced in France. The link stems from a joint company called L'Huissier, bouring meat-processing company called G. A. Bordeaux-Chesnel. L'Huissier anyway wants to expand, so it buys Bordeaux-Chesnel for cash, thus maintaining the 50-50 ownership between the two parent companies.

Monetary theories

Three reasons are being advanced in international monetary circles for holding this year's IMF jamboree in Nairobi:

It will enable the Common Market countries to see a real live snake in a tunnel at the Nairobi game park.

It will allow Dr. Emminger of the German Bundesbank to finally decide whether a zebra is a white animal with black stripes or vice versa (this is a reference to Dr. Emminger's famous contention some years ago that trying to decide if the IMF Special Drawing Right was credit—as the French said—or not was like trying to determine the zebra's colour).

Finally, this week's meeting will enable the U.S. Treasury Under Secretary, Paul Volcker (who is all of 6 feet 8 inches tall) to see eye-to-eye with someone, if only a giraffe.

Thomas steps up at Thames

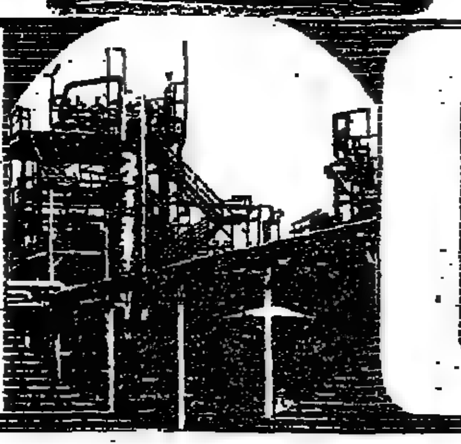
Soon after ATV, on the death Brains Trust programme and "discovered" Vera Lynn. Then, in 1944, he went to Pathé and has been with films and TV since, having the distinction of founding two TV companies, the ABC company which had the Manchester and Birmingham week-end franchise until the reallocations of 1968, and Thames, which took the London week-day franchise in the same year.

At Thames, he has managed both to make a reputation for good programmes and to make money, when around 1970 some competitors were doing neither. The other side of his work has been as a lobbyist and spokesman for ITV in general, particularly on the Fourth Channel question. As the intellectual among the lobbyists, Thomas has also been the most forthright. Some would say he has overplayed his hand on the Fourth Channel, but there is no question of his ability to talk persuasively to Government.

There remains another question, of whether it is good tactics for inevitable future political brawls to switch from more independent chairmen, like Renwick and Shawcross, to day-to-day programmers like Grade and Thomas. In the case of Thames, Shawcross, as an outside chairman, played a vital role at the birth of the company by reconciling the warring shareholders, EMI and BET. That "independent" role is no

Financial Times Survey

World Chemicals



'eriod of frustration and uncertainty

ICHAEL SIMMONS

'orld's chemical industry, ts five largest industries, :ntly going through an dented period of frustra- d uncertainty. Profits, y instances, may look nd are certainly better ey were this time last t the less than palatable that many of the major rs have been hamstrung r thinking about new ents either by the of national govern- or by the anti-pollution s, or by a real or ed shortage of essential k and raw materials.

rustration is felt all the enly because the indus- for the most part, just i to hoist itself out of matic recession that hit ds the end of 1970 and owed tangible signs of to an end at the begin- this year. The reces- racterised by depressed d profits, by low growth ss capacity, followed a f several years in the 0s when, in the words of the industry's more e spokesmen, the 's were living in "a Utopian age." Many turers who, with hind- ght be said to have been eptive than they should en, found themselves in chemicals produc- ily because demand was

were to pay dearly for wards the middle of last as estimated that there n more than £1,000m. f petro-chemical plant ing idle in Western Investment cut-backs, losures and sackings in some areas, the the day.

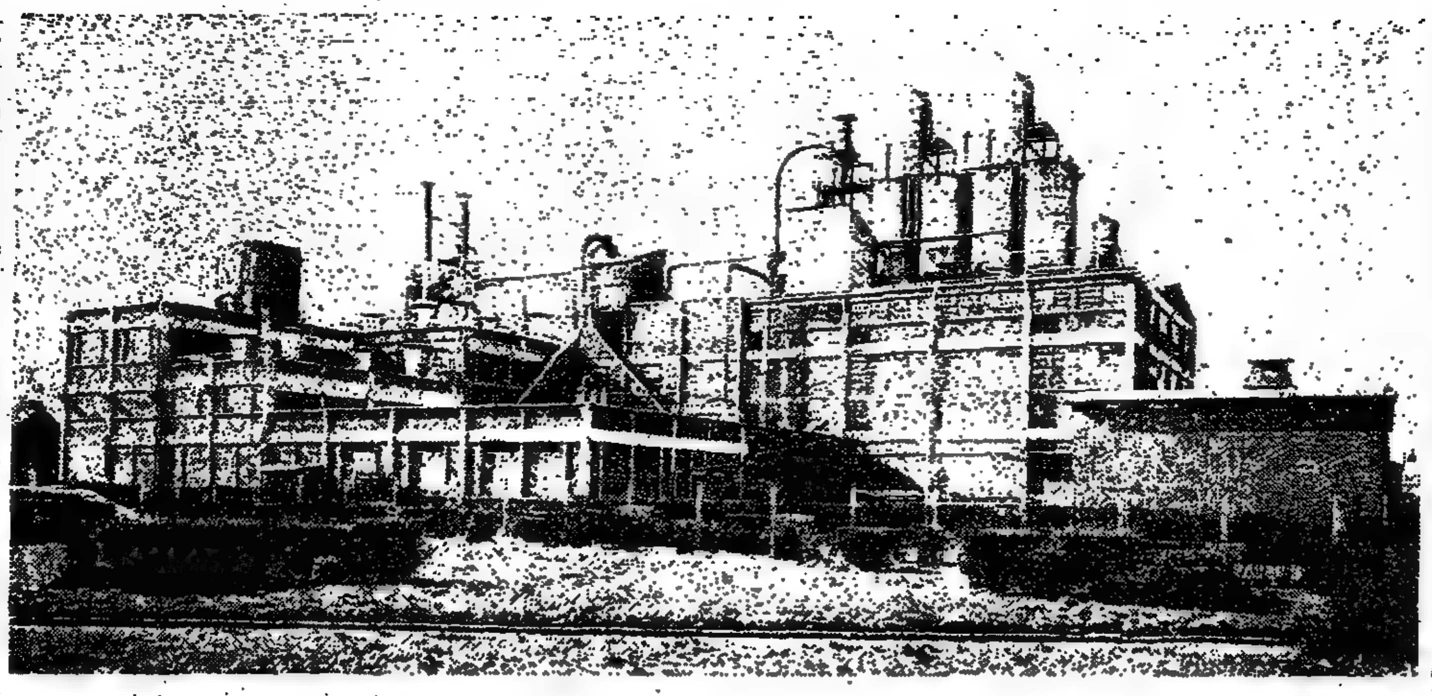
ics worked out by one bigger companies in epict quite starkly what i. Average annual growth rates during the ten-year period 1960-70 were 8.5 per cent. in the U.S. (responsible for well over 40 per cent. of the world's chemicals production) and 9.5 per cent. in Western Europe (responsible for about 36 per cent). However, the U.S. was to record a nil production growth in 1970 itself, evidence that the recession came there first; and Western Europe was to record a growth of only 3.5 per cent. in 1971 over 1970. The chemical industry, it should not be forgotten, generally thinks in terms of its growth rate being roughly twice that for industry as a whole.

Investment sector

Inevitably, this state of affairs had a repercussive effect in the investment sector. World-wide there had been a growth of about 9 per cent. a year in the industry's capital spending programme up to 1968. But the boom conditions of that year saw this figure rise sharply to 18 per cent. in 1969 and 14 per cent. in 1970—much money, in other words, had been committed before it was too late to withdraw. In 1971, despite some notable exceptions in developing countries, investment overall was at about the 1970 level.

In 1972, this year and next it is expected that new investment will be rather less than in 1971—exceptions being in the U.S., which emerged from the recession quicker than the rest of us, and some European countries—particularly those where the Government involvement in the industry is most recognisable.

But the value of these figures, for all the expertise of those who give voice to their "expectations," has been somewhat diminished even since they were prepared a year or so ago. A number of developments since that time have given fresh grounds for circumspection in the Board room as the relevant directors sit round their drawing boards. These developments, together with the nasty sensation induced by the depression just described, suggest the industry will never be the same again.



The Monsanto plant at Pas-de-Calais in France.

The British industry, pleased that output has been rising at a rate equivalent to 10 per cent. a year, has nevertheless, been dominated by what it considers the Government's intractability over prices and a number of leading producers have had applications before the Price Commission, some of which have been rejected only to be replaced by the same words in a different order. The industry rejects the notion that it is formally petitioning to be considered by the Government as a "special" case, but it insists in all its dialogues with Ministers and officials that it has "certain characteristics" which distinguish it from manufacting industry as a whole.

This at any rate is the reasoning of the Chemical Industries Association, a London-based organisation which claims to speak for 75 per cent. of the U.K. industry and which, in its latest delegation (earlier this month) to meet Sir Geoffrey Howe, Minister for Trade, included senior representatives from ICI and BP Chemicals. The Minister, who is believed to have nodded sagely and said he would "bear in mind" the points raised, was told that while world prices had taken off since the difficult times, the industry in Britain had been "trapped" by price controls, and the outlook for further investment was as a result unappealing.

Peculiar problems

In fact U.K. prices for some materials are now estimated to be as much as 40 per cent. below West European levels. This could lead to what the CIA thinks could be "serious" raw material shortages in the engineering, automobile and other labour intensive industries and could in turn mean a "serious" curtailment of industrial expansion.

At ICI, still one of the biggest chemicals producers in the world, there has frequently been a feeling in the higher echelons that the policy-makers in Whitehall do not seem able to understand the peculiar problems of the industry. In the second quarter of this year it turned in record profits—which may nevertheless be rated a less than satisfactory return on capital employed. And Mr. Jack Callard, ICI's chairman, has made no bones about the fact that current Conservative policies were such as to drive some people in his position to think more in terms of investing overseas than in Britain.

But inflation, which has been largely responsible for the British situation, is not a solely British pre-occupation. One British manufacturer, currently thinking in terms of investing up to £100m. in one part or another of the EEC area, told me recently that restrictive, anti-inflation legislation would pretty certainly be affecting the industry's investment planning in German, Holland, and possibly France before very long

The EEC area is faced with other problems than just inflation—some of them stemming from precisely the fact it is the EEC area. The enlargement of the Common Market coincided with the coming into being of the European Council of Chemical Manufacturers' Associations, an association of associations which may yet be able to speak with one voice for all the major European companies and be heard in the corridors of power in Brussels. CEFIC, as the Council is known, will shortly be publishing its study on olefins which brings together data on capacities, production and demand — information which cannot but help those in the Commission offices who are seeking to formulate a policy on oil and gas requirements among the Nine.

Any scepticism regarding CEFIC's activities, it can be assumed, will more than likely be generated in the Commission's Competition Office, which has yet to crystallise its thinking on the co-ordination of investment plans. There are many in the industry who would like a debate, loud and clear, to be started on this.

However, in Europe as elsewhere, the demand for chemicals is rising, prices are hardening, and an end is near to most of the over-capacity problems. ICI has not been the only European company to record rising profits — but in most cases overall margins leave much to be desired and still fall short of the high levels they were at four and five years ago.

According to a recently completed study by the Chase Manhattan Bank, profit margins in Europe are generally falling and will be around 4 per cent. this year. They could become even less. The same study suggests that the profit margin of the U.S. industry should go up from 6.4 per cent. last year to about 6.8 per cent. this year—a suggestion which is borne out by the latest figures from the key American companies.

Growth rate

In North America, as in Japan, a number of obstacles have been created by the environmentalists. So far as the U.S. is concerned, however, these obstacles have to some extent been overcome by investing overseas, notably in Western Europe. In the same way, the Japanese companies, enjoying—albeit from a comparatively low base—the fastest growth rate of the advanced producing countries, are also talking in Europe and elsewhere about the feasibility of joint ventures.

Finally the entire industry, and especially in those countries not producing vast amounts of their own oil and gas, has become increasingly aware of the uncertainties that it is facing, or likely to face, in the realm of raw materials supplies. It remains to be seen, probably in the short-term, how Middle East politics and the development of virtually new chemical and petro-chemical industries in such areas as the Middle East, will affect those countries where the industry has hitherto been regarded as stable and mature.

WORLD CHEMICALS II

Monitoring pollution now given great emphasis

By DAVID FISHLOCK, Science Editor

Early next year the Dutch expect to complete their national "grid" of air pollution monitors. Over 200 sensors spaced on a 20-kilometre grid—though more tightly packed in industrial regions—will automatically monitor the nation's air space for sulphur dioxide. The figures will feed to a point near the centre of Holland where the National Institute of Health has a computer. This computer will keep a continuous record of the national pattern of air pollution.

Operating in harness with the Dutch meteorological office two miles away, the health officials will be able to track any patch of air pollution that breaches Holland's borders or arises within, *provided only that the pollution remains low in the atmosphere.* The officials are now exploring what might be done by way of counter measures and warnings. But its main aim is to help the Government decide how to hold air pollution in Holland—so close to the Ruhr, quite apart from having its own large chemical industry—down to acceptable levels.

Nitrogen oxides

The principles used for the sulphur dioxide sensor or "sniffer" have now been extended to other atmospheric pollutants. The Philips researchers who developed an automatically calibrated "sniffer" *that could work* unattended for 3 months at a stretch found that the same basic principles could be used for nitrogen oxides and hydrocarbons. They learned that automatic calibration meant that the results were accepted in law when there was a dispute. They even found ways of disguising their "sniffers," on *13-feet poles,* from the unwanted attentions of small boys armed with stones.

No other nation has yet followed Holland with a scheme for monitoring the whole of its atmosphere, at least near *ground* level. But several cities have ordered the system, among them Venice (which plans to measure both sulphur dioxide and nitrogen oxides), Milan and Emilio Romano in Italy, and Mexico City where the contract requires sensors for sulphur dioxide, carbon monoxide, nitrogen oxides, ozone and dust.

In Britain, there are already two sides to the control of air *pollution.* On the one hand is the national control exercise by the Department of the Environment's Alkali Inspectorate. On *the other is local enforcement* exercised through the Clean Air Acts and the Public Health Inspector.

In a report published in July and now being examined by the Government, a working party of the Clean Air Council under the chairmanship of Rear Admiral P. G. Sharp, director of the National Society for Clean Air, *proposed a new scheme for air* pollution control through local committees called Indemats.

There is no single, recognised source of information about industrial emissions to the atmosphere in Britain. But what people are primarily interested in, the proposal concludes, is the air in their own locality.

Indemat (industrial emission to the atmosphere) committees would be composed of representatives from local industry and local authority, in equal numbers, along with independent members from, say, universities or trades unions. Their purpose would be not to implement new standards of emission control but to strip away the secrecy surrounding industry's emissions to-day. No longer would companies normally be permitted to make a deal with the national control agency, namely the Alkali Inspectorate, to keep data on *their emissions confidential.*

The Government at present accepts two basic reasons for keeping data on industrial emissions confidential. One is that the data could disclose commercially valuable information *about the process itself* or the company's plans to expand or phase out production at a given location. The second is that the complexity of data on industrial emissions can give rise to damaging misinterpretations.

Presenting data

But Mr. Eldon Griffiths, Under-Secretary for Environment, introducing Rear Admiral Sharp's report, made it clear that the Government now regards both reasons as out-of-date. The Government has taken its cue from a report last year of the Royal Commission *on Environmental Pollution,* which argued that it was in the public interest that information about industrial wastes should *be made available not just to* statutory bodies with a right to demand it but to research workers and others who could make use of the data to improve the environment. It wanted to sweep the issue of confidentiality aside, said Mr. Griffiths. At the same time it wanted to find a better way of organising and presenting the data on *emissions—one that would offer* it to the Press in a clear, unambiguous form but which avoided any charge of "editing" to present it in a more favourable light.

The scheme now under consideration is that the new district authorities that come into being next year shall set up the Indemats. These committees will gather data, publish *reports and generally act as a* fount of knowledge about the quality of air for their own locality. Any costs they *incurred by, say, calling for* special data would be a budget charge on the local authority.

In proposing the Indemat scheme, the working party makes plain that it regards the co-operation of industry as *essential.* For this reason, the report says, it is "of the utmost importance" that local industrialists should be adequately represented on each Indemat. Also important, it considered, was that the proposed system should not imply dual control by both the Alkali Inspectorate and local authorities. For this reason the Indemats, as proposed, would be controlled by neither authority and would therefore be free to voice their criticisms quite independently.

But there may be circumstances, the working party conceded, where a company would still be justified in asking the Indemat to keep data confidential. These circumstances are currently being studied before the Government incorporates the Indemat scheme in its comprehensive Environment Protection Bill, now in preparation.

Emission levels

For example, a company might wish to keep quiet about data that could reveal its plans to expand or to close a plant. Emission levels that would normally demand a chimney of a certain minimum height might be accepted by the Indemat if it were told the company was phasing out the plant. But the company might not be ready to disclose this information to its own work force. Alternatively, disclosure of a certain rate of emission, when related to the height of a stack for which planning permission had been applied, could reveal to competitors the company's plans for expanding production.

Another example that has been exercising the working party is where the chemical composition of an emission could disclose details about a process under development. This could apply in cases where new catalysts were a crucial component of the process. The steel industry has already told the working party that there *are processes under development* which may emit traces of chemicals it would not want quantified "until such time as the work is finished and a complete case, with proper assessment, can be presented to the public."

The Institution of Municipal Engineers has made the suggestion that a small section within the Department of the Environment might guide both planning authorities and the Indemats on the possible environmental effects of new processes, refer them to case studies of existing plants, or if need be, sponsor pilot-scale tests.

Smaller firms thrive by specialisation

By KEITH LEWIS

There can be no doubt that the most significant development in the chemical industry since the last war has been the emergence of petroleum chemicals, the growth being mainly *in synthetic fibres and plastics.* Advancing technology has dictated that the industry should progress chiefly through larger and larger plant in order to benefit from the economies of scale. Capital investment by *the chemical industry in the* 1960s reached a tremendous pitch, with many companies prepared to fund their expansion programmes outside of their own financial resources so as to achieve volume growth and market share, *often at the* expense of overall profitability.

However, it could now be that the industry has changed its view to the extent that companies are no longer achieving economies of scale through sheer size. According to stockbrokers Hoare and Co. Govett in their review of the industry (published last March) some German companies have already stated that they intend to keep future expansion programmes to "within their own cash flow levels."

In 1970, 1971 and the early *parts of 1972* there was an international depression in the chemical industry following on from the over-capacity created *by the new plant coming on* stream, commissioned in happier days. And now, conversely, with many groups unwilling to invest in plant after the recent recession there are shortages of certain *materials. But assuming that* the capacity of the U.K. industry is sufficient to meet demand—and there may be some doubt on this score due to the time lag between when a plant is actually commissioned and when it is in operation—the brokers are expecting gross output in the chemical industry in the U.K. to rise from £5,650m. in *1973 to £8,550m. in 1977.*

Disparity in size

The extraordinary thing about the U.K., of course, is that the industry is dominated by one company, ICI. And while many other companies are large by normal industrial standards the disparity in size between ICI and the rest is enormous. Nevertheless, it has been possible for quite a number of groups to carve out a highly *profitable share of the market,* without actually arousing the giant to take them over. The secret has been to concentrate *on highly specialised areas* where the volume and effort involved are not sufficient to attract ICI, or any of the other major internationals, while at the same time remain flexible enough to work almost on a "one-off" basis with little volume but very high return.

Some companies' names have become synonymous with just one activity. Albright and Wilson, for example, is the sole manufacturer of phosphorous in the U.K., Canada and Australia; according to Hoare and Co.'s manual, in 1971 52 per cent. of sales were in the U.K., 16 per cent in Europe, 12.6 per cent. in North America and 8 per cent. in Australasia, though in that particular year the phosphorous operations were in a loss situation owing to troubles with a new plant in Newfoundland. Fortunately the group does *have other activities, including* detergent raw materials, flavours and perfumery and agricultural products.

Industrial gases

British Oxygen, as the name implies, is mainly concerned with the production of industrial gases; Fisons is famed for fertilisers; and Laporte is now a major in peroxygen chemistry having linked these interests with those of Solvay. Another interesting, though small, company (turnover just over £3.8m. in 1971-72 financial year) is *Allied Colloids which manufactures* chemicals for the textile, mining and mineral process and paper and board industries. In the company's own words it produces "highly complicated, researched-based chemicals *which either speed up production or improve quality.*" Examples of this would be the flocculants (used in separation processes) and the sizes that are used in the textile industry. There is little doubt that the group is operating in a growth area, and, unlike the majority of the chemical companies, profits have been on a strongly rising *curve since going public in* 1966. The latest figure shows that profits in 1972-73 were almost £1¼m. against the previous year's result of £¾m. Heavy capital expenditure on research and overseas marketing is expected to continue to keep profits moving in the right direction.

Hickson and Welch, with profits running at about £4m. before tax a year, is one of those companies which is "prepared to have a go at anything"—in other words, it manufactures chemicals to order. It is best known for the *manufacture of intermediates*—dyestuffs and optical whitening agents, selling to most of the large, paint, pharmaceutical and detergent manufacturers. For the most part, no tonnage is too small or too big (within reason) and the strength is there so long as the business is not seen to be so lucrative as to attract one of the majors on a take-over. Normally one of the majors will approach H and W to carry out just one or two stages in a long chemical *process. Depending on whether* this is a new product—where no one knows if it is going to be a "winner"—the job will be costed, and the company must be competitive since the customer will undoubtedly have sought other estimates and, if *the price is too high,* turn to setting up its own process. One obstacle for a group like H and W. in this highly capital intensive business, is one of funding.

Yorkshire Chemicals is another highly successful specialist company; it produces dyes, adhesives, soap and detergents. Much of the growth in recent years has been provided by the overseas operations, *with profits* now split roughly 50:50 between U.K. and overseas. The consensus is that there is very little *which is likely* to halt YC's progress for some time.

It would seem, then, that there will always be a place for the small chemical producer to make a handsome profit, leaving the volume struggle to the giants of the industry. One of the main problems of the industry as a whole has been the *cyclicity of profits,* and it is apparent that the majors are starting to concentrate on areas of most profitable operation—the main concentration in recent years having been in paints, pharmaceuticals and pesticides. Other potential areas are synthetic protein and new smoking materials.

Another trend that is discernible is the growing internationalism of some of the U.K. groups. Often in the past plant would only be installed in the U.K. and Commonwealth countries, but now the groups are considering any stable area where the highest margin, lowest cost operation is attainable. The difficulty lies in being small enough to be flexible and yet large enough to remain independent and hold one's own in this highly competitive industry.

U.S. operations overseas

MIKE HYDE, Editor, Chemical Insight

lthough it is no longer ionable to write about "le *Americaine*," it is the U.S. panies which most people in mind when they think t the "multinational" oration. Yet in the inter- onal chemical industry e, the American companies not quite been the "*defi*" Servan Schreiber's imagina- . Neither are they as ltinational," if that is the t word, as are the major opean companies which rate on an international s.

his is not to say that the U.S. companies do not pose hreat to their European nterparts for they most ainly do. As a generalisa- they are more efficient in utilisation of manpower and e aggressive in marketing tegy. The Europeans, how- , are catching up on both ts. If the degree of "multi- onalism" depends on the portion of overseas business tal sales, then certainly the opean chemical companies more multinational than Americans.

s can be seen, all the Euro- companies listed have a er proportion of their ness outside their home kets; the U.S. companies however, increasing their seas business at an lerating rate, particularly Pont and Dow. While many of the European companies are concentrating their overseas investment expenditure on the United States, the world's largest market for chemicals, it is equally true that the U.S. majors are spending heavily on the build-up of production facilities in Western Europe, notably in the European Economic Community.

Tariff barriers

The reasons are the same in each case: to overcome tariff barriers. To give an idea of the size of the two markets, in 1971 the turnover of the U.S. industry was $52,000m., compared with $45,000m. for the countries which now comprise the enlarged EEC; the 1971 turnover of the former "Six" was some $30,000m. Despite the incidence of the American Selling Price system (ASP) which helps to boost the U.S. tariff on a wide range of organic chemicals (the so-called "benzenoids"), U.S. chemical imports have continued to increase, the rise last year amounting to 25 per cent. with imports from the EEC higher by 32 per cent.

U.S. chemical exports last year showed an increase of only 8 per cent. and shipments to the EEC rose by a miniscule 1.4 per cent. The EEC, on the other hand, saw its chemical exports rise 12 per cent., the increase in the case of imports being contained at 9 per cent. While the United States overall balance of trade has been unfavourable for some time, the chemical industry has always enjoyed a healthy balance. However, the positive balance showed a 57 per cent. rise in 1972 compared with overseas business in chemicals in 1962, the balance has declined in each of the last two years. The EEC's chemical trade balance in 1972 was 186 per cent. higher than in 1962 and 31 per cent. above the 1970 total.

companies sales in Europe, 1972

	Total	As % of overseas sales
	$m.	%
....	591	58
Pont†	556	46
n Carbide†	500	33
n	454	55
santo	320	58
r	261	49

n-consolidated

U.S. companies' performance in Europe

	Sales-per-employee, 1972		
	Total	Overseas	Europe
	$'000	$'000	$'000
....	49.3	51.3	53.7
Pont†	39.2	45.6	50.1
santo	38.4	na	35.3
n Carbide	23.2	21.1	29.4†

sed on non-consolidated totals.

Although there has been a general slowing down from the high rates of growth shown by the chemical industry in the 1950's and 1960's, the EEC continues to expand its chemical business at a faster rate than the United States. The export figures show that if the U.S. companies are to increase their business in the enlarged Common Market, then they must set up production facilities on the spot.

Although a number of U.S. companies do in fact already produce in Europe, it is largely a case of a relatively few companies having a large number of plants. An increasing number of speciality chemical producers are setting up plants, often on a joint venture basis, in Europe. One of the first lessons the U.S. manufacturer has to learn—and it is one which the majors absorbed many years ago—is the fact that the "Common Market" is not the unified market they thought it was.

Before the formation of the EEC, the United Kingdom was a favoured place for plant construction if for no other reason than that of a common language. Signing of the Treaty of Rome, however, has seen virtually all the U.S. companies move their European headquarters out of London, and a similar shift of production emphasis. Du Pont, Dow and Union Carbide are now headquartered in Switzerland, while Essochem and Monsanto have chosen Belgium.

In each case these companies now have some very large production facilities on the Continent; in each of the past three years capital spending in West Europe has represented 50 per cent. or more of corporate totals: 50 per cent. last year, 59 per cent. in 1971 and 52 per cent. in 1970. Actual distribution of the construction dollar in Europe is more difficult to pin down, but it is clear that some countries are more favoured than others. For instance, investment incentives in southern Italy proved an early attraction after the war for U.S. companies; most of them have, however, since backed out. France is another country not greatly favoured for U.S. investments because of national attitudes. Despite that there are a number of joint ventures there, but apart from Esso Chimie's plants near Le Havre, there are few really large U.S.-owned facilities.

Germany and Scandinavia have attracted a number of the U.S. majors, as have some other European countries, particularly Spain. However, by far the larger part of U.S. capital expenditure in the EEC has been placed in Belgium and Holland, particularly in the port areas of Antwerp and Rotterdam. Each country has played a major role in the merchant trade and the two ports are well equipped with storage facilities and each provides an excellent point of entry into the heart of Europe.

The U.K. which saw the first investments of U.S. chemical industry in Europe has largely been passed over in the past ten years. As long ago as the 1920s, Monsanto had built up a large production centre in Britain and, if pharmaceutical companies are excluded, is now among the top ten U.K. chemical producers in terms of turnover. In 1972 U.K. sales still represented more than 50 per cent. of total European sales ($176m. out of $320m.), but Monsanto now has manufacturing plants in Belgium, France, Luxembourg, Spain, and West Germany.

New projects

Union Carbide and Exxon each has chemical plants of long standing in the U.K., but each has similarly placed most of its new investments in the past ten years on the Continent of Europe.

An exception to the general placing of new projects across the Channel has been Northern Ireland which in the past 15 years has seen the build-up of an extensive synthetic fibre industry, with the U.S. strongly represented by both Du Pont and Monsanto. More recently, Ireland has seen the development of a large pharmaceutical industry — the past two years having seen five U.S. companies attracted to the country: American Home Products, Abbott Laboratories, Merck and Co., Smith Kline Corporation, and Pfizer. Warner Lambert and Squibb are already operating pharmaceutical companies in Ireland.

In terms of monetary values, Du Pont's European production facilities at the end of 1972 were worth $770m. followed by Dow with gross plant properties of $670m. and Monsanto on $414m. Dow's total assets in Europe are likely to top $1,000m. this year as some big new plants come into production; Du Pont is also pushing its European business and overall expects total foreign sales to double by 1977 to hit $2,000m. Dow's aim of $1,000m. of sales in Europe by 1977 could be met in 1976.

Although investments will continue to be made in West Europe, and on an increasing scale, the U.S. majors are stepping up their expenditures in Latin America at a faster pace.

None of the U.S. majors give net income from their European operations although Dow has a healthy record from the point of view of operating income. There is little doubt that the heavy cost of constructing large plants in the past ten years, coupled with the high costs of commissioning, has retarded profitability. To some extent this will have been offset by the fact that the companies concerned have chosen their best products for manufacture in Europe, products in which there is usually a technological advantage. Thus, Dow have a very strong position in Europe in polystyrene, the strategy being to build small to medium-sized plants at a large number of locations. Dow in fact have more manufacturing sites in Europe than any other U.S. company. Out of the total of 24, there are two major locations for the production of basic chemicals — olefins, chlorine, etc.—at Terneuzen in Holland and Stade in northern Germany.

This ability to choose the most profitable products for production in Europe, combines with the fact that exports make up a large proportion of sales in Europe to give most of the American companies better sales-per-employee ratings in Europe than they achieve at home (Table 3). The same rule-of-thumb, in fact, holds good for the European companies operating in North America.

U.S. overseas chemical trade, 1972

	Exports	over '71 Change	Imports	over '71 Change	Balance	over '71 Change
	$m.	%	$m.	%	$m.	%
Totals	4,134	+7.7	2,015	+25.0	2,119	−4.8
Trade with:						
W. Europe	1,434	+3.5	933	+32.2	501	−26.2
EEC	929	+1.4	591	+31.6	338	−27.6
U.K.	251	+18.4	177	+35.1	74	−9.5
EEC and U.K.	1,180	+4.6	768	+32.4	412	−24.8

EEC and U.K. overseas chemical trade, 1972

	$m. Exports	% over '71 Change	$m. Imports	% over '71 Change	$m. Balance	% over '71 Change
U.K.	11,205	+11.7	7,710	+9.0	3,495	+17.9
EEC	2,360	+9.8	1,585	+15.7	775	−0.6
EEC and U.K.	13,565	+11.2	9,295	+10.1	4,270	+14.1

Overseas sales as percentage of total

Company	Overseas sales, 1972	As % of total sales 1972	1969
	$m.	%	%
Bayer†	2,671	67	64
Hoechst†	2,468	58	54
Akzo	2,245	88	84
ICI	2,152	54	52
Ciba-Geigy	2,064	97	98
BASF	1,814	49	49
Rhone-Poulenc	1,243	51	49
Du Pont*	1,141	24	15
Solvay	1,038	88	87
Dow	1,021	43	36
Union Carbide	991	30	26
Exxon Chemical	831	63	na
Monsanto	552	25	23

† Overseas sales include 100% of companies owned 50%.
* Includes principal non-consolidated affiliates.

While exports from the U.S. have increased, albeit at a slower rate than was the case in the 1950s and 1960s, there has been a change. With the build-up of production facilities in Europe, an increasing share of the products crossing the Atlantic are now in the form of intermediates and raw materials designed to feed the new plants, rather than finished products.

Change of emphasis

Another change of emphasis has come from the gradual evolution of the EEC's industrial policy which has seen action taken against dumping; thus U.S. companies no longer view Europe as a dumping ground for exports at marginal prices, designed mainly to keep large plants in the States fully loaded.

This year should see record business for the U.S. companies. The indications are that U.S. chemical exports will reach record levels, topping $5,000m. At the end of July, shipments were up 38 per cent., the boom having reversed the balance of payments trend because imports have been growing at a slower rate, according to the U.S. Bureau of Census.

All the U.S. companies have welcomed the enlargement of the EEC and see it as providing opportunities for increasing business in existing products as well as for the introduction of new products and new technology.

Mr. Milton H. Campbell, chairman of Du Pont de Nemours International SA, Geneva, says a big advantage of the enlarged Community will be to allow greater flexibility for plants producing the same or similar product lines. He does not, however, expect any sudden upswing in business due solely to enlargement.

Head of Monsanto Europe SA, Brussels, Mr. O. S. Tuygil, says that his company predicted 1973 as the most likely year for Britain to join the EEC. "Our investments and operations have been planned on that basis." Like Mr. Campbell, he sees the "Nine" as giving companies more freedom in the procurement of raw materials and a potential broadening of scope for marketing operations.

This year has seen a "tremendous surge in volume demand in practically all sectors of the industry and this has pushed up the operating level of Monsanto's plants in Europe." The group's profitability is increasing as a result, a fact mainly due to better plant loadings, rather than to price increases.

Dow Chemical Europe's president, Mr. Zoltan Merszei, is extremely bullish about his company's prospects in a larger EEC, although he does not think that the actual enlargement will affect the company too much since it is already operating right across Europe. This is particularly true at a time when demand is soaring, as at present, bringing extreme pressure on all the company's product range. He says: "We have no product of significance which is not in short supply at present; we are sold out of just about everything."

World-wide Dow is currently operating its plants at about 90 per cent. of capacity; in Europe, plants are running much closer to 100 per cent. Mr. Merszei says: "As a company we have never before produced at such high rates. We believe that in profits we are doing better than anyone else in Europe at present—and don't forget that whatever we are adding to in Dow Europe, we are putting on top of what was a highly successful year in 1972."

Record peak

Dow's European chief sees no end to the boom conditions in the foreseeable future. Throughout Europe, August, normally a quiet holiday month, has seen sales hit a record peak for any month in Dow's history.

The danger seen by many European executives is that the strong and continued upswing in demand will lead to another round of plant building. The accent is on caution; memories of the previous over-capacity, price cutting and consequent profit erosion are providing a curb on new investments which in itself is fuelling the present shortages.

One thing is certain, all the U.S. companies operating in Europe are extremely cautious about European notions of avoiding future surpluses by means of inter-company co-operation. Mr. Merszei speaks for most when he says, flatly, that he just does not want anything to do with it.

WORLD CHEMICALS IV

U.K. firms caught in severe price-cost whirlpool

By RAY DAFTER

At a time when the British chemical industry might have hoped for better trading conditions — its spare capacity of recent years is now being absorbed through increased demand — it has found itself caught in a vicious price-cost whirlpool.

The industry is faced with more expensive feedstock while at home it is restricted in the prices it can charge by the Government's price code. Although Phase Three policy is still open to conjecture, senior representatives of the British chemical industry have told Sir Geoffrey Howe, Minister for Trade, that producers feel "trapped" by the low prices. Plastics manufacturers said the same thing when they met the Government.

According to the industry, the prices are having a restraining effect on investment at a time when it is needed. Companies are looking to the next round of investment, not only to meet expanding markets but to improve the utilisation of some chemical feedstocks (where this is possible) and to develop new technology to use those products of oil production that are still relatively cheap and freely available.

Price controls

The British industry has warned that continuing price controls will deter investment. But the situation does not only apply to U.K.-based companies. Monsanto Europe, for instance, said last week that while investment plans are based on long term consideration "in the short term, price controls can influence timing and priorities of investments."

The American-based company added: "To the extent that price controls prevent adequate return on investment, they will inhibit near term investment in the U.K. In the past the U.K. has shown its ability to remain competitive with the European continent and the rest of the world. Barring some type of prolonged Governmental control such as price restraint, investment in the U.K. should remain competitive."

While British companies may be feeling the squeeze more than most—its prices are reckoned to be about 30 per cent. less than those abroad—this price cost spiral is one which is having, or will have, an effect on virtually all world wide producers.

The root of the problem can be traced back to the oil situation, a state of affairs that has become even hazier in recent weeks with Libya's decision to take control of all companies operating on its territory and to raise prices. It has been reported that the buy-back price being asked of the recently nationalised majors is a heady $6 a barrel, $1.10 more than the unprecedented, expensive arrangement with Occidental and almost double the Gulf price.

Whether the companies would agree to pay such a price is highly doubtful, but Libya's most recent actions have obviously increased the likelihood of renegotiated prices throughout the Organisation of Petroleum Exporting Countries (OPEC).

OPEC has set October 8 as the date for negotiations with Western companies on increased revenue. The States are clearly seeking a new deal that will mean replacing the five-year Tehran prices settlement originally meant to last until the end 1975 with a new agreement reflecting both the higher oil prices realised in the market over the past year and the pace of world inflation.

The whole pricing policy within OPEC has an overtone of political influence, both among the States themselves and externally. It has been intimated that some States might cut back further the output of crude from their territories both from a political standpoint (to put pressure on the U.S. to become less pro-Israel) and from the standpoint of conservation (with declining world stocks, oil in the ground could be considered better than money in the bank). They know that the bulk of the additional oil can only come from the Middle East which has two-thirds of the world's proven reserves. They also know that the industrialised world—Japan, the U.S., and Western Europe in particular — is intensifying the seller's market.

Price increases for crude oil has a chain reaction throughout the processing sectors. Very roughly 50 cents on a barrel of crude would add $4 a ton to the price of naphtha and put $10 to $12 a ton on the current European spot ethylene price, at present around $200 a ton. Again, very roughly, it is reckoned that the cost of benzene rises by $1.7 per ton for every $1 rise in the value of premium motor gasoline.

Higher salaries

It is not just the rising cost of feedstock that is causing trouble, however. Inflation, higher salaries and wages and increasing operating and distribution costs all tighten the squeeze in a time of price restraint. It is reckoned that if only the price of crude oil went up by 10 per cent. the cost of a plastic bucket wold probably rise by just 2½ per cent. That, however, does not take account of all the other cost increases. It may take some time for the increases to filter through. The buyers of the major base chemicals are a few large manufacturers—many of them part of, or directly linked with oil companies. In a simple chain they sell the derivatives to the producers of the goods who, in turn, sell them to the wholesalers and consumers.

Any attempt to speed up the cost recovery process can lead to disruption among the small and fragmented companies at the end of the production chain. Indeed, small plastic moulders, faced with high cost materials and, in some cases, a drastic cut back in feedstocks, are facing reduced production, redundancies and possible closure. That is why the energetic chairman and managing director of Victor International Plastics, Mr. Victor Mizrahi, has spent so much time, money and effort recently, publicising the plight of the companies at the end of the production chain. He has now set up an Independent Plastics Association as an "alternative voice" to the British Plastics Federation.

There is no question that there is sufficient hydrocarbons to meet the chemical industries' demands; it is forecast that by 1980 the world chemical demand will rise to only 5.5 per cent. of the world's total requirement of hydrocarbons.

Nevertheless, it will be feedstock which will have to be bought at an attractive price from the oil companies' point of view. The chemical industry must demonstrate that supplies for chemicals are more valuable than supplies for energy.

On the face of it chemical companies closely allied to the oil industry appear to be in the best position, certainly in times of feedstock shortages and rising prices. Unless the whole energy versus chemicals demand for hydrocarbons falls badly out of line the supply to companies like BP Chemicals, Shell Chemicals and others linked with oil companies, seem assured.

Sales terms

In Britain's top 20 chemical companies, it is interesting to note that only *four* are truly independent concerns. The bulk are part of oil companies or multi-national groups. The sales of BP Chemicals, for instance, represent about 11 per cent. of BP's total business. Shell Chemicals U.K. sales represent just 1.5 per cent. of the Royal Dutch Shell net sales.

Of the independents, Albright and Wilson—fifth U.K. chemical group in terms of sales—seem to be losing that status. The U.S.-based Tenneco group, with oil, gas and chemical interests, has won through the provision of a loan, a right to 50.6 per cent. of Albright and Wilson's equity compared with a 10 per cent. holding at the end of last year.

Even the giant but independent ICI which takes its feedstock from all round the world has a 50 per cent. interest with Phillips Petroleum in the Phillips Imperial Petroleum refinery on Teesside. In ICI's case, its own brand of petrol is something of a bonus for producing so much chemical product.

It is fair to say that everyone in the production chain, from the major oil companies to the smallest plastic moulder, is trying to find a way to alleviate the current problems.

Oil companies, urged on by the chemical industry no doubt, are looking at the possibility of eliminating the top "five star" grade of petrol which would release more aromatics such as benzene, toluene and xylene for chemical feedstocks. With pollution laws requiring lower lead content in petrol, aromatics substitutes are being used in greater quantities. It is estimated, for example, that for every one octane drop on "four star" petrol, 75,000 tons of aromatics could be released: that the elimination of five star would release between 200,000 and 300,000 tonnes. This would be more than enough to make up the present shortfall in supplies, according to some industry sources.

Diesel engine manufacturers and road haulage operators in Britain are also being asked to introduce modifications to diesel engine designs. Such modifications would enable oil companies to market a slightly lower quality diesel oil thus giving them 3 per cent. more diesel oil and gas oil from each barrel they process.

Fuel systems

The recommendations have been made by the working group on low temperature operability of diesel vehicle fuel systems, part of the British Technical Council of the Motor and Petroleum Industries.

Welcome as such moves and suggestions are, the measures are palliatives rather than cures. The cure lies in a secure atmosphere of supplies and costs: a freedom from political interference and an allowable profit margin to encourage technological development. In the present world situation, it is perhaps asking too much that all of these conditions are satisfied.

Linking the national chemical organisations

By DAVID CURRY

The Press release issued by the *Conseil Europeen des Federations de l'Industrie Chimique* (CEFIC) put it rather picturesquely. Mr. P. Braber, it said, "is fluent in several European languages and likes to sail the seas with his family as a spare-time activity." The gentleman in question was being announced as the first Director-General of the new pan-European association of chemical industries which brought together two previous organisations, one already in Brussels to represent the EEC chemical industry associations and a second in Basle which was the original of CEFIC, which represented the EEC and EFTA producers.

Mr. Braber was released by Shell International Chemie-Mij NV to take up the Director Generalship. His linguistic abilities were an obvious commendation, but, given the investment headaches facing the European industry and the lack of definition of the industrial and competition policies of the Commission, his talent for being able to sail through troubled waters must also have been a sturdy recommendation.

Cyclical business

The objectives of the association are stated in the constitution. They are "the study and eventual solution of all the problems of interest to the chemical industry in the widest possible sense, in particular those of a scientific, technical, documentation and institutional nature, in which is included collaboration within the framework of the European Communities."

It is the last point which was the immediate objective when the association came into being just under a year ago. Its immediate task was to devise a system "to provide an improved means for considering investments."

The reason for this preoccupation lies in the nature of the chemical industry itself. Like other industries, including machine tools, chemicals is a cyclical business, and the association was formed as the European industry was caught up in a depression characterised by excess capacity and reduced profits. The growth in the size of the industry accentuated the impact of the depression. Now chemicals account for about 12 per cent. of Europe's industrial output and its investments total around £1,500m. a year. In these circumstances, the association reckoned, some system whereby investments were looked at in a Europe-wide context was clearly needed.

But there is a narrow tightrope to walk. The plans of the European producers of polyester fibres to co-ordinate investments earned them a sharp rap over the knuckles from the Commission on the grounds that investment by agreement and, thus, control of production would represent an infringement of the Common Market competition rules.

Polyester fibre producers had argued that the case for co-ordination was justified by the need to avoid the sort of over-production that had occurred in the past. The Commission riposted that a co-ordination agreement would violate Article 85 of the Treaty of Rome—the competition clauses.

However, the Commission does not insist on a free-for-all investment policy. It wants to see a sensible co-ordination of planning in the area under its jurisdiction, but defines this as a system which will be conducive to the general social good and the proper supply of markets. Mr. Norbert Menges, the head of the Commission's chemicals division, has said that, in the face of competition from outside the EEC, it was hard to see how the European industry could put up strong resistance without accepting "a minimum of co-ordination and concentration of its efforts in investment."

Thus, what emerges is a rather ill-defined notion of "restrained competition" involving sufficient co-ordination to avoid the creation of excess capacity but stopping short of any sort of collaboration that implied carving up the market. "The idea of companies getting together round the table and deciding what, where and when to invest is, of course, impossible, and would never be permitted under the Treaty of Rome," accepted M. Emile Raskin, the President of CEFIC.

Faced with this rather ill defined theology, CEFIC has a difficult course to chart. The practical definitions of its own powers have, in addition, still to be elaborated. While some chemical concerns are looking for a body with teeth sharp enough to monitor investments, other concerns seem happier to have a more platonic association.

U.S. subsidiaries

One of the problems is the heavy state involvement in some national chemical industries. This is particularly true in France and Italy, where the Commission's thinking receives far from complete endorsement. In addition, the U.S. subsidiaries in Europe have the anti-trust laws to think about when they are urged to give information to CEFIC. Finally, Spain is not represented in the association which embraces the EEC producers, apart from Ireland, Austria, Finland, Norway, Sweden and Switzerland. Spain is a substantial producer and investor.

This faces CEFIC with the problem of being able to engineer little more than a partial exchange of information at a time when it is important for the industry to have a definitive voice in Brussels. Despite the ill definition of Community thinking, the precedents for a solid working relationship with the Commission are fairly good. CEFIC's Brussels predecessor, SIIC, was involved in consultations in formulating policies covering things like transport, pollution and dumping, and as part of its exercise to determine energy requirements, the Commission had asked SIIC to co-ordinate information on the industry's demands, capacities and output for olefins, aromatics and their derivatives.

But with the industry emerging fairly strongly from the 1972 depression, investment plans are being formulated as a matter of urgency. There are, of course, certain inhibitions on rushing ahead with investment. In Germany, where the big three of Hoechst, Bayer and BASF are bringing plant back into full production, the Government's anti-inflation policies are penalising investment, while in Britain the price-freeze (on prices set at depression lows) and the huge sums involved in investment is imposing caution on the industry. However, by the end of the year there are likely to be some fairly clear ideas on investment by industries in the member states of the CEFIC organisation. This will be when it has to prove its abilities to encourage an orderly investment programme to prevent a new lurch into over-capacity and when it will have to sort out with the Commission the practical as opposed to the theological definition of co-ordination.

CEFIC is in fact anxious not to get too tied up in theology. It recognises that it is probably better to treat individual problems as they arise so that they can build up with the Commission a series of precedents. Thus, it is probable that it will try to establish a sound working relationship with the Commission by discussing individual sectors of the industry as their needs come to the fore.

The best way for consultation to develop, it is recognised, is probably through an extension of the means which exist for consultation within national industries. The U.K. industry already has Government-blessed channels of consultation, and the French industry consults through regular Government machinery. In addition, it is clear that effective consultation depends on the availability of extensive statistics about the chemical industry, and some sectors are severely deficient in statistics. One of CEFIC's tasks will be to try to encourage the more efficient collection of national data on a standard basis that will provide solid Europe-wide information for the Commission.

Gloomy times for process plant sector

/ DAVID WALKER

e past five years have been icult ones for process plant ricators. Problems in meet- demand followed by cyclical investment down- n by the process in- stries—chemicals, gas, oil, el, food manufacturing, elec- ity generation, and so on— mpted the setting-up of a vernment-backed working ty to keep a constant eye on £600m.-plus a year industry. s led to a heavy shake-out labour and cutback in capac- and prompted considerable rganisation.

\ downturn overseas, too, ught increasing foreign com- ition on the U.K. market in lition to entry into the mar- by companies normally ve elsewhere in mechanical ;neering; uncertainty over el prices—stainless steel is fabricators' major raw terial—made the costing of s difficult and brought losses some fabricators; and pleas prospective customers to n out their spending pat- 1 and so make the meeting demand possible when an urn finally came went gely unheeded.

'o-day, even though other tors of the economy, espec- y elsewhere in mechanical ;ineering, have been boom- , the process plant fabrica- s are still far from out of woods. To a considerable ent, the upturn does not yet ear to have reached them h chemicals producers, in ticular, still, holding back n increasing their expendi- e on new plant despite the rtages of their industry's ducts now appearing.

ack of confidence over ure profitability because of ertainties as to the future rse of state price controls been specifically named by chemicals industry as a or factor in inhibiting its stment.

he clearest picture of what appening in the industry is produced annually by the cess Plant Working Party of National Economic Develop- ment Office. Its last report, published only three months ago, is not an optimistic one as far as the established process plant companies are concerned.

It is true that the working party forecasts expenditure on process plant hardware this year and next as possibly and in real terms reaching the peak levels seen in 1967 and 1968. But, it points out, established manufacturers will not feel the full benefit of this because of the emergence of new companies making specialised equipment for the Continental Shelf oil exploration and production programmes which form so significant a part of likely future process plant expenditure.

Steady decline

Leaving that aside, expenditure in terms of 1963 prices shows a steady decline from 1968 to 1973 before a slight predicted upturn in 1974 and 1975. And all of that, and more, is accounted for by heavier investment by the electricity generation industry and by the British Steel Corporation's recently Government-sanctioned massive investment programme—in connection with which some initial contracts have already been placed outside this country in any case.

Specifically, capital expenditure on plant by the process industries is expected to reach £530m. (plus £174m. on maintenance) this year, at late 1972 prices, going up to £541m. (£177m.) in 1974 and dropping back to £485m. (£180m.) the following year. For 1972, the actual figure is put at £418m. with an additional £165m. going on maintenance.

The figures are impressive when compared, say, with the low point of £374m. plus £120m. recorded in 1969. But the larger part of the difference is accounted for by inflation. If a constant price comparison is made, the situation becomes far less rosy.

Total projected 1974 spending becomes only £455m. at 1963 prices, little more than the £430m., on the same basis, of 1968. Using 1963 prices again, expenditure last year was only £379m., while investment this year is expected to go up to £445m. dropping back to £421m. in 1975.

The chemicals sector is probably the most problematical of all those in which the process plant fabricators find their customers. Forecasts drawn up by the Chemical Industries Association suggest that investment this year is likely to be of the order of £274m. (at early 1973 prices), going down to £267m. in 1974 and then seeing a slight upturn to £269m. in 1975 and staying at much that level in 1976. Some 45 per cent. of the total each time is represented by process plant hardware.

Those figures compare with estimated actual spending of £312m. last year and £374m. in 1971. For a year earlier, the figure is put at £381m. How accurate the predictions are, however, is open to some question, largely because of the time lag—often a year or more—between investments being authorised and actual expenditure taking place.

In 1967, for example, the devaluation of the pound resulted in a big rise in both home and export sales of chemicals which, in turn, stimulated much higher authorisations. In 1970-71, the reverse happened with the emergence of a world-wide surplus of capacity.

To-day, the industry is recovering from its overcapacity problems—indeed, in many sectors, shortages have developed—as demand has risen and prices have increased.

More flexibility

But, it has claimed, the price freeze and the continuing controls have retarded the return to profitability in the organics, plastics and associated sectors, while confidence in the future is being hit by uncertainty over Phase Three of the Government's anti-inflation programme. The CIA has warned the Government that, unless more flexibility is allowed, investment is likely to continue to be relatively low, with its forecasts proving, if anything, optimistic. Alternatively, the CIA has said, if confidence can be fully restored before the end of this year, the forecasts could well be exceeded.

In the oil industry, uncertainties prevail, quite apart from the vexed question of how much North Sea work is likely to be placed with British companies. At late 1972 prices, spending on process plant and equipment in the petroleum refining sector is expected to be £41m. this year compared with actual investment of £51m. in 1972. Next year a drop to £33m. is forecast, with a rise to £54m. in 1975 and another advance, to £58m., the following year. But, at March this year, only 68 per cent. of 1973's projected expenditure had been committed, while for 1974 the figure was but 8 per cent. and for 1975 just 2 per cent.

On exploration and production, a big increase is expected, with last year's £42m. figure for process plant spending leaping to £159m. both this year and next. The problem here, however, is that oil exploration companies with little or no previous experience in the U.K. have a natural tendency to turn to their traditional suppliers in the U.S. or elsewhere. A major campaign to secure a bigger slice of the action for British companies is being waged by the Government and there is, for example, believed to have been Department of Trade and Industry intervention in the recent £100m. contract awarded by the Phillips Petroleum group for the first phase of the terminal facilities for the North Sea pipeline planned to take oil from the Ekofisk field off Norway to Teesside.

The order was eventually placed with the Sim-Chem division of Simon Engineering following talks between the DTI and senior executives of Phillips who are thought to have favoured placing it with Ralph M. Parsons (U.K.), a subsidiary of the Los Angeles company of the same name.

The problem is one largely facing contractors — those actually building the plants or whatever as opposed to the fabricators manufacturing the component parts as a result of orders largely given out by the contracting companies—but it has ramifications right down the line. And added to it is the fact that some equipment is simply not available from U.K. suppliers or unobtainable here in sufficient quantities.

The other major sectors providing business for the process plant fabricators are steel and electricity generation, in both of which big investment increases are planned. BSC hardware purchases this year are expected to amount to £41m., rising to £49m. next year, and going up again to £66m. in 1975, to £70m. in 1977, and up again to £75m. the next year. In the electricity industry, the heavy plant makers are expected to see orders of £78m. this year and £84m. in 1974 against £56m. in 1972.

Overall, the major hope for increased business for the U.K. fabricators would seem to lie in further penetration of overseas markets, where process plant investment is generally rising. The amount that can be done here by fabricators as opposed to the contractors with whom most original orders are placed is, however, obviously limited. But the need for the British fabricating industry to look carefully at overseas competition and prospects—and especially the desirability of setting-up local manufacturing facilities—is already well understood. Companies making smaller components, such as specialised valves are already notching up a great deal of success, but for those at the heavy end of the industry, where few if any U.K. companies are yet really in a world class, the situation is much more difficult.

Overseas contracts

Fabricators have been steadily expanding their export business with orders placed in this country by contractors here for overseas contracts rising steadily. In 1969, they represented only 53 per cent. of the total orders for overseas contracts placed by U.K. contractors; last year the proportion was 75 per cent.

And the contractors themselves have been steadily attempting to step up their involvement overseas, both through orders placed in this country from abroad and, much more significantly, through their acquisition of overseas companies to bring them on to a multinational basis comparable to that of the big American contractors who dominate the world scene and, at the same time, do much to make Britain a European centre for the industry through their subsidiaries here.

The notable U.K. example is Davy Ashmore's Power Gas subsidiary which, through a long and at times painful process of reorganisation, has established itself as the world's leading process plant export contractor. Nonetheless, the 12 months to the beginning of June saw U.S. companies dominate the world scene, gaining nearly two-thirds of all the orders placed in Western Europe for chemical and petroleum plant.

Power Gas achieved a 21 per cent. rise in the value of its export contracts, according to a Chemical Age International survey, notching up a total of £344m. in the June, 1972, to June, 1973 period compared with £284m. in the previous 12 months.

Overall, however, the U.K. companies' performance in the 12 months was more than disappointing. Total business gained by them in Western Europe alone fell from £287m. in 1971-72 to only £79m. in the latest period. Both French and West German companies also lost ground, while U.S. concerns saw an 8 per cent. decline, but the British drop was by far the worst.

Indeed, it is still clear that the U.K.-owned companies, with the exception of Power Gas, are still not really as internationally competitive as they must be. Intensive rationalisation of the industry has been carried out, but not yet enough.

The past few months alone have seen significant steps and attempted steps in this direction. At the end of December, Simon Engineering bid for Davy-Ashmore, thus resurrecting a dream of the old Industrial Reorganisation Corporation, but was opposed by the Davy-Ashmore Board. More recently, Babcock and Wilcox gained control of Woodhall Duckham, and Head Wrightson opted out of the steelworks plant business under a deal with Davy-Ashmore which made that company the leading U.K. contractor for iron and steel-making plant.

Important move

On the fabricating side, too rationalisation has been continuing, and bids have been seen. Most notable was Whessoe's attempt to take over Capper-Neill, a potentially most important move which could have made one of the leading companies on the U.K. market a force to be reckoned with throughout the world. That bid fell through, however, when it was referred to the Monopolies Commission and Whessoe decided not to proceed rather than argue its case out.

That the deal did not go through was almost certainly a serious blow to this country's competitiveness. On both the contracting and fabricating sides, the U.K. process plant industry has done much to improve its position in recent years. But that more reorganisation needs to be effected is unquestionable.

nternational trade union activity

JOHN ELLIOTT, Labour Editor

he growth of multi-national panies and the expansion of Common Market has led to upsurge in international e union activity in many istries. This is specially of the chemical industry, ch lends itself more easily nternational union co-opera- than in other less technical more labour-intensive indus- s.

1 a theoretical level it seems and sensible to most union ers that they should co- rate internationally to try ounter the increased power managements which them- es are co-operating inter- onally through multi- onal corporations. But, at ractical level, these same n leaders find it difficult ure up to the tasks of chang- their parochial attitudes and ding some of their auto- ly which are essential if they to go to the logical limits co-operation and rationalise r international activities.

t the same time, some multi- onal companies are loath- xpose themselves to inter- onal activity, claiming that r national managements in vidual countries have quate and effective relation- s with their own unions. gradually this attitude ears to be softening.

Labour economist

ne of the main exponents of international unionism case harles Levinson, a Canadian has been the secretary eral of the International eration of Chemical and eral Workers' Unions (ICF) e 1964. A graduate of onto and Paris universities 1 degrees in economics and strial sociology, he was a ur economist with Canadian ns before moving into the rnational union business in early 1950s. Before moving the ICF in 1964 he was uty director general secre- of the International Metal- kers Federation for eight s.

evinson regards the forma- of a "truly international e" to be a "condition for onal trade union survival." he is under no illusions ut the changes in attitudes ch this will require from onal union leaders whom often exasperates with his chant for publicity for his e.

1 his most recent book "International Trade Unionism" which was published last year in the U.K. by George Allen and Unwin, Levinson develops his theme.

"The strategy through which the international union movement will develop a comprehensive action programme must be to advance pragmatically, but progressively, towards full collective bargaining with multinational corporations," says Levinson.

Master agreement

"Ideally this would involve a single master agreement covering wage parity and other conditions of work within the corporation. Where companies are ready to make the epochal bargaining leap from an exclusively national to an international position, as they have in respect of their investment and production, progress can be swiftly achieved.

"One would be surprised, of course, to find such enlightenment. Even if an individual company was progressive enough to consider taking the plunge, the concerted pressure of others would deter it from such corporate perfidy. It will therefore be through direct industrial action that progress is made."

Levinson believes that this action will start with a union in one country helping another's strikes or negotiations—as already happens from time to time on a small scale.

The second phase would be for this sort of action to be co-ordinated to involve several unions in different countries while a "truly international agreement," would constitute the third phase.

But Levinson recognises a fact that has come through clearly from the U.K.'s TUC—that such developments will be slow and must be preceded by a large amount of research and preparatory work. This is already taking place with various companies. Data is being compiled by Levinson's organisation on 40 multinationals and companies are being approached for preliminary discussions—in some cases granted and in others refused. Then unions are moving on to try to discuss issues with companies which are not too contentious—such as training and fringe benefits and other social provisions.

Levinson's ICF bases much of its operations on the formation of world councils for individual multi-national groups. The 40 companies which the ICF is looking into will appear on ICF files covering their international structure, location of plants around the world, joint ventures, financial statements, labour agreements, the size and type of their work forces and comparative working conditions. One fairly early target is to have the most important collective bargaining information programmed for a computerised data bank, says Levinson.

The world councils being created by the ICF—there should be 25 by the end of this year—will cover the chemical, rubber and glass industries in companies such as Michelin, St. Gobain, Pilkington, Shell and Dunlop-Pirelli. Another ten are planned for next year.

Logical structure

Another important level of co-operation is at European level within the EEC—although the British TUC is still unwilling to recognise that European organisations are directed at activities in Brussels. The ICF is setting up a special European committee for unions in the Common Market. This will function as a subsidiary of the main ICF which the chemical unions consider a more logical structure than the pattern being established in some other industries where European union organisations are being set up independent of the industries' main international union bodies.

From the U.K. the main unions involved in the ICF include the General and Municipal Workers Union (which affiliates with a sizeable membership of 100,000), the Transport and General Workers Union, the Electrical and Plumbing Trades Union and the Association of Scientific, Technical and Managerial Staffs.

With their counterparts in other countries, they see the logic of international co-operation. But few of them have actually been involved as yet in major international action. The day of such action is still some way off although managements around the world will increasingly find the ICF and the other international union secretariats knocking on their doors and demanding to be met and recognised.

Higher efficiency from inbuilt safety systems

By ISRAEL BERKOVITCH

"It is fundamentally good business to operate safely so as to minimise personal injuries and property losses." Furthermore "all personal injuries and property losses can be prevented." The formulation of this statement from the U.S. Dow Chemical Company reflects the move away from considering concern for safety solely as a humanitarian, welfare issue; building safety into the system is now seen increasingly as a procedure for controlling loss in order to secure higher efficiency as well as minimising risks for all those involved.

In addition to possibly hideous human consequences, accidents cost money. And the loss potential of the chemical industry is increasing as plants get bigger. Even a small incident can lead to a large loss of time. It is this consideration reinforcing those based on the needs to avoid hurting human beings and to keep within the law that has led the British Chemical Industry Safety Council (BCISC) to urge the practice of Safety Audits as part of normal good business operation. What do they mean by this term? A safety audit is defined as a systematic critical examination of an industrial operation in its entirety to identify potential hazards and levels of risk. To fill out this essential concept and guide firms on the objectives, scope and technique—as well as the action to be taken when the audit is completed—BCISC has published a booklet on it.

Despite the many sources of potential casualty in the chemical industries, their general accident record is a relatively favourable one, and that of some of the larger firms is exceedingly creditable. Dr. T. A. Kletz of ICI has quoted some earlier work on the fatal accident frequency rate per 100m. exposed hours as being 3.5 for the chemical industry against four for British industry as a whole (or for that matter 40 for coal mining, 57 for travelling by car and 1,000 for canoeing). Interpreting other data on accidents is more difficult as a series of Chief Inspectors of Factories have pointed out, since not all accidents are notified to them and short term absence is not a stable indication of the severity of an injury.

Detailed analyses

Very detailed analyses of incidents have been carried out both within the industries and by such bodies as the Fire Protection Association covering such issues as the section of the industries, principal item of plant where it originated, source of ignition, nature of material and even time of day when a fire started, for guidance on preventive measures. One of the striking conclusions that calls for some careful thought, arises from lack of communication between companies, presumably due to ingrained habits of thought in a competitive situation. H. D. Taylor and P. G. Redpath of the FPA have quoted two cases of explosions—one in vinyl chloride polymerisation plants, the other in phenol-formaldehyde polymerisations—where the same catastrophe had hit similar plants in different companies. They were no trivialities either. One involved damage of $4m. and the other built up a pressure in a reaction vessel which sheared off 36 one inch bolts. Yet the managements concerned had not seemed aware of the earlier catastrophic experiences. Has this loophole been blocked? Is there any way in which designers or managers can learn of incidents with like processes in competitors' plants where these have not led to personal injury or public announcement?

Where the data on hazards are known—or thought to be known—sophisticated attempts have been made to develop quantitative approaches. There are never enough resources to remove all hazards at once. But Dr. Kletz, at a symposium of the Institution of Chemical Engineers outlined a technique for estimating the fatal accident frequency rate for each operation and comparing it with a specification in order to establish the relative priorities. This specification might be for instance to eliminate as a priority any hazard on a new or existing plant which is higher than that for the industry as a whole (and incidentally corresponds to one fatality for one man every 150,000 years). Alternatively risks may be compared by expressing the cost of eliminating them as a cost per life saved. These approaches demand data on how often items of equipment fail in service and on the likelihood that a fatality will result. Several organisations are now collecting these data systematically. Linked with this type of hazard analysis is one based on determining whether the expenditure is justified in terms of economic loss prevented.

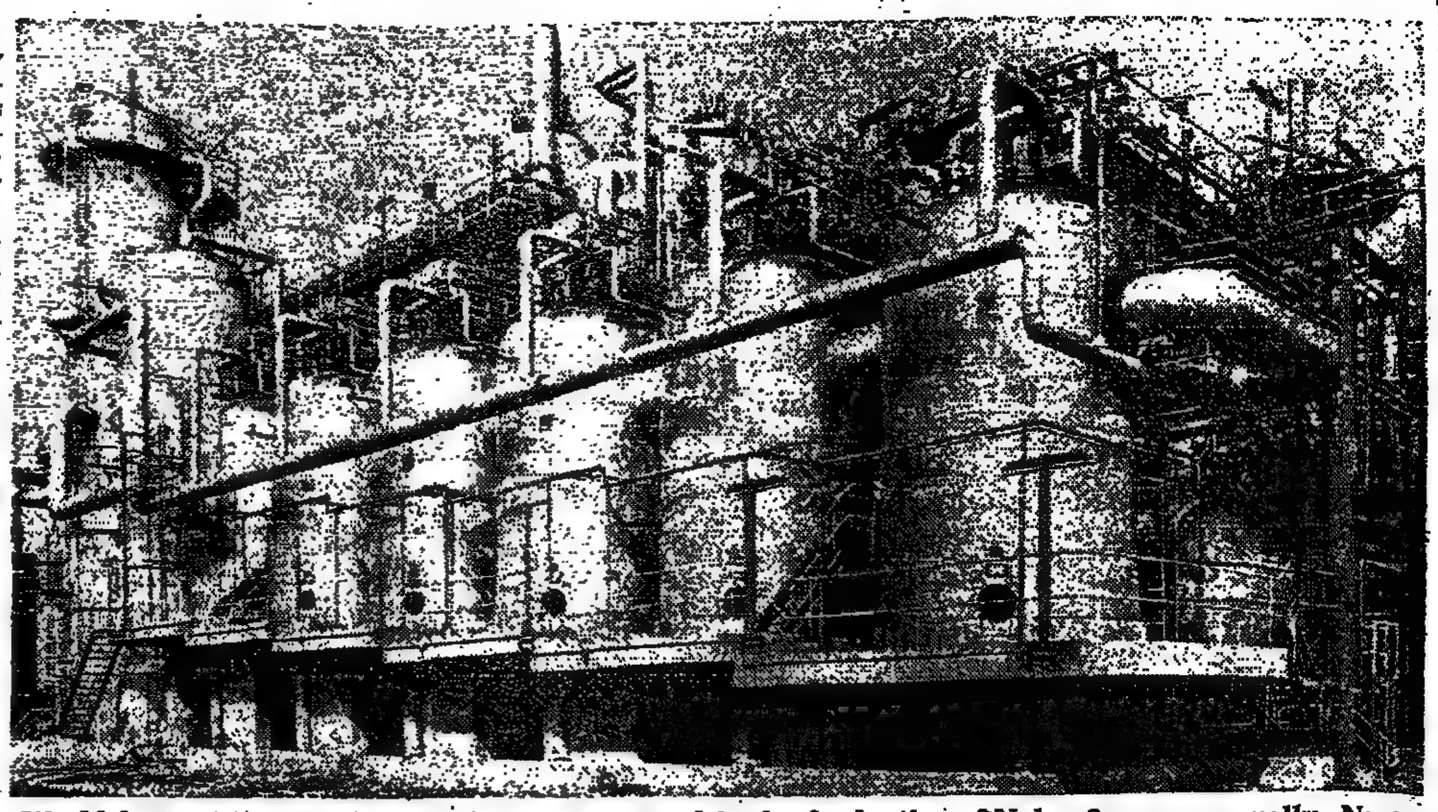
Based very heavily on statistical methods there is now a branch of engineering known as reliability engineering which has been successful in the electronics, aerospace and nuclear energy industries. Dr. B. A. Buggham of Loughborough University of Technology has pointed out that with suitable changes of emphasis these can be applied to processing operations enabling alternative plant configurations or processes to be compared objectively in their ability to perform their jobs, and leading the analyst to discovering danger points. However, even where full information is not available for such analyses, designers may know that new plants are operating closer to their safety limits than earlier ones, running at higher temperatures and pressures, possibly using more dangerous chemicals.

To meet these more severe needs, greatly improved "high integrity protective systems" have been devised and operated by the Heavy Organic Chemicals Division of ICI. Instruments with safety trip arrangements including automatic shutdown have been duplicated and even triplicated on such plants. In addition, Dr. R. M. Stewart has described how so-called majority voting systems are used, since one of the troubles of these instruments is the risk of spurious signals due to a faulty instrument causing a plant shutdown. Consequently electrical circuits have been designed that ensure that if only one of the high integrity trip initiators sends a danger signal on one measured property, the plant is not tripped, though an alarm is given. But if two out of three or all three send the same message, the safety devices operate in full. The complete system is expensive and is authorised only after the best possible hazard analysis has justified it.

At the BCISC, Mr. D. E. Pickbourne, its executive secretary, steadily urges that attention to occupational health and safety should permeate all industrial activities and committees—design and operation, obviously, but also such areas as transport, labelling, insurance, training. Recognising the special problems of the smaller firm, he is planning a series of courses around booklets directed at just these targets; happily, the first three courses are oversubscribed auguring well for the success of their efforts. And whether the enterprise is large or small, the Council recommends clear commitment by top management to a written statement of safety policy to influence all intermediate levels of management and the direct operators. Like other aspects of management, this includes defining responsibilities, identifying problem areas, defining objectives, preparing a programme, implementing it, monitoring progress and reviewing its overall effectiveness. This brings us back to the need to introduce a regular system of independent auditing to ensure that the company's assets are effectively safeguarded by a successful safety and loss-prevention programme.

Further elements

The elements of this safety audit are given as examining the accident record, drafting and issuing a questionnaire on relevant issues, identifying possible loss-producing situations, assessing potential losses associated with these risks; since this is an audit intended to lead to action the further elements are selecting measures to minimise losses, implementing them within the organisation and finally monitoring the changes. In a unit with fewer than 150 employees the works manager may well be the man to do this job, but outside consultants are suggested for larger works. Yet, though the need to involve operators and the manual trade unions in this work has been acknowledged, these proposals have ignored what Mr. J. Morris Jones of Kellogg International has called the "hero" myth, particularly in respect of the construction stages. The man who takes excessive risks in construction or handling of chemicals may be wrongly characterised as courageous by his workmates. It leads to rejecting protective equipment and short cuts of many kinds. Has this been investigated and have sensible ways of overcoming it—as distinct from admonitions—been developed? The need to consult with workers is, of course, intrinsic in the Government's proposals for a Safety and Health at Work Bill based on the Robens Report. But it is doubtful if the behavioural side of safety is receiving as much attention as the physical chemical and mathematical analyses.



World demand for caprolactam, the monomer used in the production of Nylon 6 grows annually. Nypro (U.K.'s) new £15m. plant pictured here at Flixborough, Lincolnshire, uses a new process developed by DSM.

A large slice of Britain's trade

By DAVID CURRY

Chemicals figure hugely in Britain's trade. Our imports in 1972 were worth £651m. Our exports totalled £961.6m.—almost equivalent to the value of our total sales to the U.S. of all goods. The two major items in our imports are chemical elements and compounds (£257m.) and plastics (£143m.). The same two categories head our exports with sales worth £254m. and £176m. respectively.

Britain's surplus balance on chemicals has been stretching over the past few years. From 1963 to 1968 it rose from £166m. to £192m. By 1971 it had climbed to £316m. though it sagged somewhat last year to £310m.

The basic raw materials for the chemical industry are oil, sulphur and phosphorus which are imported, though sulphur could be had at home; and limestone, salt and potassium which can be obtained locally. Apart from raw materials trade is composed largely of intermediate materials and finished plastics.

Trade is also fundamentally between industrialised countries, though there are important new markets for chemical products opening up for exporters. Britain's suppliers are almost exclusively countries embraced by the OECD, with West Germany and the U.S. each accounting for more than £100m. in sales last year and Holland selling products worth £81m. OECD countries, however, account for only about two-thirds of British markets in chemicals, though Western Europe took nearly half our sales and North America accounted for a further £87m.

Consistent share

Chemical exporters in this country have held a consistent share in world trade over the past few years. In 1971 they edged over the 10 per cent. mark to 10.2 per cent. after edging up to that level from 9.8 per cent. in 1968. Her exports worth $2,155m. were less than half those of West Germany whose sales were worth $4,538m. The U.S. exported chemicals to the tune of $3,847m., giving her a 18.1 per cent. stake of world markets.

The three countries hold very different positions in individual markets. The U.K. held only 6.3 per cent. of the EEC markets against the German share of 23.5 per cent. and the U.S. stake of 13.3 per cent.

Her proximity to the Scandinavian markets also helped Germany to take a 30.6 per cent. of the total market in EFTA against a British share of 9.6 per cent. The U.S. had 10.9 per cent. of the EFTA market.

The U.K.'s main strength was in Australasia and South Africa where her shares were respectively, 29.5 per cent. and 29.1 per cent., representing a slow decline over the previous few years. Germany was well behind in Australia with 12.2 per cent. and had a 18.6 per cent. share in South Africa.

The U.S. came closely behind the U.K. in Australia and New Zealand with 26.5 per cent. and had 21.7 per cent. in South Africa.

But Australia and New Zealand and South Africa are relatively small markets, and the main factor in trade over the past 20 years has undoubtedly been the growth in sales to Europe. In the period from 1954 to 1969 the U.K. increased her sales to EFTA by 11.9 per cent.; to the Six members of the original EEC by 11.2 per cent. and to the rest of Western Europe by 11.9 per cent. Canada and the U.S. each recorded an 8.4 per cent. increase in sales while shipments to the old Commonwealth were limping along relatively at half the European increase.

Imperial Chemical Industries has committed itself to try to triple its sales in Europe by the early 1980s from the £234m. it sold last year, of which more than 40 per cent. came from local manufacture and other sources. Given a quick recovery in the European chemical industry from the slow growth rates which have characterised it since mid 1971 the company thinks that it could even double sales within three years.

It intends, according to Mr. Robert Malpas, chairman of the European Division, to secure a threefold increase in the output of products manufactured on the Continent, and it is thought likely that the main sectors involved will be plastics materials and agricultural chemicals as well as fibres.

Wary approach

This confidence comes at a time when the European industry is somewhat wary of making new investments following the 1972 depression, from which the industry has not yet recovered fully. In addition, the continuing uncertainty in the currency situation is adding to the nervousness of company managements when they are discussing fund-raising.

Continued on next page.

Varying approaches to plant design

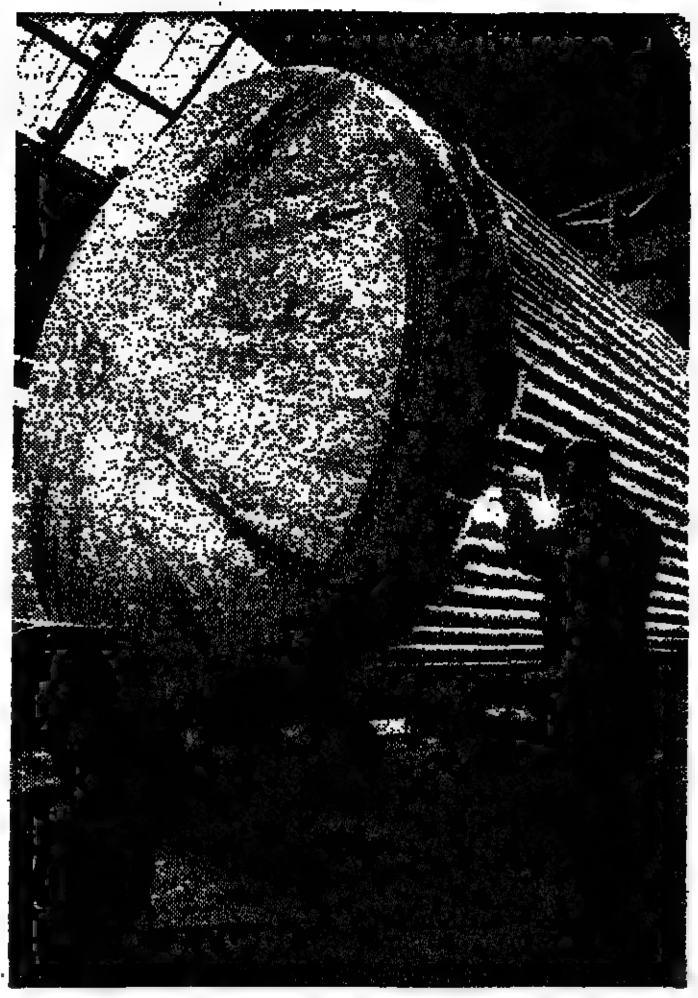
BY ISRAEL BERKOVITCH

Two sharply bifurcated paths being followed by plant ...m for the developing ...tries. The first leads to ...e, highly instrumented, ...ern manufacturing units of ...h the same kinds as those ... see around us in the ...strialised areas of the ...ld. It is normally the pres... route favoured by the ...ernments of the territories ...selves. The request to use ...ay well be coupled with ...irements to use locally ...ed chemists and engineers, ...well as locally produced ...urces. But the other way ... well become as important ...e coming years. It is to use ...illed "intermediate tech...gy" for chemical and other ...s of manufacture. This ...oach is based on applying ... cost, labour-intensive tech...es to make products that ... living standards and com... the unemployment that is ... endemic over large parts ...e developing world.

...e current pattern is well ...trated by a recent ...uncement by the Overseas ...lopment Administration ...eign and Commonwealth ...e) concerning the construc... of a naphtha cracking ...t. Britain is to lend India ...n. for the plant as part of ...trochemicals project spon...d by the Indian Petro...icals Corporation Ltd. The ... will be free of interest ... maturity at 25 years and ... costs are being met by ...n financial institutions. ...lar arrangements have ... made in the last few years ... other plants: they have ...ded, for example, three ...liser complexes in India, a ...thylene plant and two ...liser plants in Turkey. ...ils of the financial arrange...s and the degree of local ...cipation in both the ...cing and the design/...ruction/operation aspects ... widely according to the ... resources available. In ...land, for instance, building ...inery is wholly a respon...ty of the contractor from ... industrialised world. No ...onents are available, ...y "off the shelf" and Mr. ... C. Davies of Humphreys ... Glasgow said that this ...nsibility would even ...d to the need to operate ... plant for a period. Even ... local operators have been ...ed, it is still necessary to ... Europeans in top ...gement positions.

Abadan plants

... the other hand at ...lan plants are run by ...d local managements from ...to bottom—illustrating the ... in many developing ...tries to expanding their ... educational facilities. What ... the consequences in the ...d of contracting for new ...ts? For the Indian projects, ... contractors may send out ... a few experienced plant ...ners and chemical ...neers to head up a design ... of some hundreds of local ...uates, technically very ...ble but lacking the breadth ...xperience in looking for ...lls. One expert saw it as ... pattern likely in Kuwait, ...stan, Iraq, Egypt and others ...e there was now an out... of engineers trained to ...ee level and so far inade-quate outlets for their skills resulting in technical unemployment. Nevertheless, he and his colleague, Mr. Ben Oakley, saw a continuing major role for the consultants not only in the technical direction of projects but also in the planning, marketing and finance, particularly in view of their wide international connections. Endorsing this general analysis of trends, another leading contractor added that though local engineers in these countries were often competent, their "exposure to chemical engineering developments" was relatively small so that contractors contributed expertise based on intimate contact with world-wide research and development. But the pattern was certainly there and well illustrated by the story of two plants in Brazil; an earlier butadiene plant had been fully designed in the U.S. and everything imported, while on a current project 75 per cent. of the man-hours had been Brazilian. In fact, governments were almost forcing them into becoming educators. The result was summed up by Mr. Twist, of Power-Gas, in the phrase that "all developing countries are now doing things that they never did before."



A stainless steel reaction vessel at the Hyde works of SSV.

Growing problem

Against this pattern of formerly wholly backward countries rushing to establish the most modern large-scale capital-intensive units identical with those in the technically advanced societies, the intermediate technology advocates argue along these lines. Unemployment in the developing countries is a massive and growing problem. Poorer countries are investing their limited resources in labour-saving equipment with the effect of forcing standards of the vast mass of their people below subsistence level. A major shift of emphasis is therefore advocated to help the poor "to work themselves out of poverty" through the right kind of machinery, in the right places, at the right prices. The capital cost per job created is an important part of their argument (and incidentally one that was heard within Britain in respect of large plants going to our own Development Areas). Chemical plants represent many thousands of pounds investment per job created. Thus in an area of mass unemployment if it cost £5,000 to set up a job, the cost of 5m. jobs would be £25,000m.; but if we could design socially productive means of creating jobs at £10 a time, this would call for only £50m.

In a report by the Jerusalem University Department of Economics and using several economic criteria Dr. David Morawetz examined the petrochemicals industry of Colombia comparing it with a group of labour-intensive export industries. Petrochemicals was found to be inferior on all the criteria used—direct and indirect employment created, foreign exchange saved and earned, degree of international competitiveness of costs and prices, and in linkage effects on the rest of the economy. The only advantage found for petrochemicals was that it saved on management. Professor Dudley Seers of the Institute of Development Studies said that this illustrated how the old emphasis on import substitution at all costs is giving way to a more discriminating approach on the implications of projects for the economy as a whole, a theme incidentally running through the work being done at his Institute.

For chemicals the Intermediate Technology group suggests these criteria for manufacturing processes.

1. Processes should be simple and involve the minimum of equipment.
2. Power requirements should be small.
3. Processes should be labour-intensive.
4. They should be batch processes capable of operation on scales from very small to medium size.

How are these sizes defined? A very small scale process would be capable of being carried out in a dustbin, or a 50 gallon oil drum; a medium size one would be a reaction vessel that could be made locally of sheet metal. Can processes be designed in this way? IT claim that it is not only possible but that they may embody the latest in technological discovery though translated into relatively simple equipment. What is more some university departments have begun to take an interest and have projects in train for designing to meet these needs.

In an article in "Chemistry in Britain," Dr. G. F. Reynolds referred to methods for fermenting dung to yield methane as fuel and fertiliser as solid residue, for making caustic soda for use in village industry, making soap, destructive distillation of wood scrap for solvents, tar and pitch, or other treatments to give sugar molasses, alcohol or yeast. Seaweed even under these conditions cannot compete as a source of iodine, but can be used for sodium carbonate, ammonia, mixed oils, while sugar cane — in addition to obviously being a source of sugar—can offer begasse as fuel and sugar cane wax. To stimulate interest a booklet has been published on chemicals from biological resources (covering plant, marine and animal products) generally referring to processes no longer operated in the highly industrialised societies since other sources, notably oil and natural gas, have made them uneconomic.

Local needs

Are the developing countries themselves interested? The answers are so far patchy. When President Kaunda of Zambia asked for help with a process for making egg-trays, IT found the smallest existing machine cost £170,000 and made too many. They had designed a new type of egg-tray which needed no box, then had a machine designed costing £8,500 making the numbers required and capable of being used for other purposes—a modest piece of processing equipment but better suited to local needs. Other countries stay wedded to the big prestige projects. But the logic of capital demands and pressures of unemployment are going to force more attention to this style and magnitude of plant design — and the big contractors are showing some interest.

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...arge slice

... resolving the investment ...tion British companies are ...d also with the uncertainties ...he Government's economic ...es, particularly the degree ... length of price restraint. ...he moment price levels in ... U.K. are so depressed, ...ng been frozen before they ... a chance to emerge from ...low levels obtaining during ... 1972 depression, that ...rts are infinitely more ...ctive than home sales. ...ed, the industry has said ... the restraint on prices at ... could lead to serious ...vation of the home market ...use of the greater profit...ty of overseas markets.

... rapid increase in the ...try's trade surplus in the ... six months of this year ...s the attractiveness of over... markets in Europe where ... levels are up to 30 per ... higher than at home.

... very important element in ... European situation is the ...sal being discussed by ICI, Shell and BP Chemicals to build a £100m. ethylene plant in the U.K. with a capital of about 500,000 tons a year. Ethylene is crucial to the production of some fibres and many plastics and solvents, and European consumption is rising by about 7 per cent. a year and could, it has been estimated, double this rate of expansion. The urgency of the project is heightened by the soaring price of basic feedstock. Over 12 months the price of gas oil has risen by 80 per cent, and that of naphtha has doubled.

Ethylene plants

Ethylene plants have had an unhappy year world-wide. The Idemitsu Petroleum Company's cracker in Japan suffered an explosion, the BP cracker at Baglan Bay caught fire on its commissioning day, while ICI has also had trouble with its Wilton cracker. It is estimated that the new plant, if it is agreed, must be on-stream by early 1977 if there is not to be a very acute shortage with the consequent search for new suppliers at a time when the European situation generally is likely to be very tight.

Two plants are being built in Europe. One is for the West German VEBA group and is almost finished, while the Charbonnages de France plant is due to come on stream towards the end of next year. Two projects, of rather uncertain definition, are under consideration in the U.S.

While Europe is the focus of present attention, it has been noted that there has been no dramatic changes in the contribution individual markets make to our export shipments. The same is also true of the composition of British export trade in terms of individual product areas within the chemical industry as a whole.

Over the 1954-1969 period chemical elements and components has dropped from 27.7 per cent. to 24.3 per cent. and dyeing materials has slipped from 14.3 per cent. to 11.1 per cent. Essential oils have also lost weight declining to 8.9 per cent. from 14.1 per cent. of the total. The growth area was clearly plastics, which rose from 11.3 per cent. to 18.7 per cent. while medical products and pharmaceuticals crept up from 16 per cent. to 17.2 per cent.

But the figures can be misleading. What counts in exports is less the value of final shipments but to what degree the U.K. has contributed added value to the products shipped. Thus, while parmaceuticals are clearly growing strongly in the export field, manufacture involves the import of a lot of fairly costly penultimates. Plastics, on the other hand, are home-made from domestic raw material (with the exception of pahtha) and make a more substantial net contribution to the trade balance. Other products with high added value include agro-chemicals and pesticides, which can still be traded around the world rather than manufactured locally as soon as a market is established.

This is an important factor in chemicals trade. The radius of the sales areas which plants can supply economically is shrinking, and the very heavy costs of distribution in the traditional heavy chemicals field dictates to some extent the establishment of local plants.

WORLD CHEMICALS VIII

Sharp falls in investment

By ANN TAYLOR

While capital investment in the chemical industry worldwide showed an 11 per cent. annual growth rate in the 1960s, compared with 6 per cent. for all industry, the economic recession starting this decade hit the industry when it was down. 1970 was characterised by extensive and costly under-utilised capacity, more large plants coming on stream, slower demand growth, leading to a substantial drop in profitability and many chemical producers started to cut back on their investment plans.

Recent surveys of chemicals investment by Chemical Age International on a country-wide basis have shown sharp falls—a 20 per cent. drop for Benelux, 33 per cent. for the Netherlands, 37 per cent. for Italy, more than 23 per cent. for France and 5.7 per cent. down for West Germany.

The U.K. Chemical Industries Association forecast a drop in capital expenditure this year to £290m. from a provisional figure of £310m. in 1972 and an actual figure of £362m. in 1971. Over the next three years, U.K. chemicals spending should remain static at around £300m. a year.

Frozen prices

At this moment, however, U.K. companies are complaining bitterly that insufficient profitability, frozen prices and lack of confidence and incentive are drastically holding back investment. The CIA have told the Government in no uncertain terms that the British chemical industry has lagged seriously behind other industries in announcing investment plans this year—a situation which will cause hardship for other industries down the line, who depend on the chemical industry for their raw material supplies. Such shortages have already hit hard in the plastics sector, for example.

Unless the Government's Phase Three anti-inflation policy eases price restrictions, the serious cut back in investment will have long-lasting effects. Jack Callard, ICI chairman, has openly stated that U.K. price controls may tip the balance in favour of overseas investment. Already, a vital decision on the next major ethylene plant for the U.K.—basic building block for chemicals — has been delayed.

New investment worldwide in 1973 and 1974 is likely to be below the 1970 level, which totalled some $11,540m. It will also be more selective. A survey of export contracts by Chemical Age International this year, which gives some guide to the state of investment around the world, showed the total value of these contracts at £4,574m., or 15.7 per cent. below the previous year's £5,430m.

U.K. chemical companies are not the only ones to carp about the problems of raising prices, the competitive situation which is aggravated by continuously rising pressures on profitability, and currency fluctuations, all of which make it difficult to plan investment for the future. Hoechst chairman, Dr. Rolf Sammet, remarked recently that the German price index for chemical products was lower than in 1962. U.K. prices are said to be as much as 40 per cent. lower than Continental ones. Hoechst is increasingly investing in plant in the immediate vicinity of its markets and has emphasised that opportunities for expansion lie mainly in overseas production.

German and Dutch chemical investments are also threatened by Government measures, including an investment levy in the former and a possible regional selective investment tax in the latter. Numerous German chemical projects have been postponed and in 1972 domestic investments fell by DM800m. to DM4,500m. Dutch chemical investment is expected to fall to below the 1972 level of Fl.1,525m., compared with Fl.1,832m. in 1971.

BASF investment is actually rising this year, though a large proportion is going to overseas and they are planning very considerable U.S. investments in the next five years. This is certainly one trend to watch—increasing investment by European producers in the U.S. and South America.

One feature of world chemical plant investment in the last ten years has been the high proportion made by U.S. companies overseas — accounting for $1,330m. in 1971 outside the U.S., or over 15 per cent. of total chemical investment in these areas. Over 50 per cent. of this was in West Europe.

Major changes

There have been major changes in the distribution of investment both by product sector and on a geographical basis. West Europe has remained the most important market, followed by the Middle East; then comes East Europe and the Far East.

Petroleum refining and related projects remain the leading product sector, representing 44 per cent, of spending in West Europe or 18.5 per cent. of world investment, with heavy organic chemical following, 23.5 per cent. down on 1972 and well below 1971. Again, West Europe is the most important area in the world for heavy organic chemicals investment. Fertiliser projects are third in importance, displacing inorganic chemicals, with the bulk of spending in the developing countries. The West European share of fertiliser investment places it third, after the Far East and the Middle East. Inorganics come fourth.

Nevertheless, there will be a very large increase in production of chemicals to meet demand throughout the 1970s and into the 1980s and to sustain that growth, enormous sums of capital will be required.

One recent prognostication was that, if the U.K. economy grew at an average of 3.5 per cent. and if chemials were to maintain their projected capital-to-output ratio, the industry would have to invest around £3,000m. between 1973 and 1977. A large part of this financing must come from profits and the "large plant philosophy" was supposed to take care of this, by facilitating lower prices and more economic production. The huge volume plants must push companies into more sophisticated planning and, probably, closer to the consuming end of the market. Hence the importance of CEFIC, the new pan-European association of national chemical federations, whose objective is to compile basic figures that have sufficient authenticity to be used as a basis for forward investment planning by the industry throughout Europe, with the backing of the European Economic Commission.

The technical advances which made possible the economies of scale and helped reduce prices drastically over the last decade cannot be maintained indefinitely. Indeed they will be of far less significance in the future. The sanctity of the idea that the larger the plant, the lower the costs of production has been somewhat undermined and its generally agreed that the optimum size for a plant must be calculated on the size of demand for its products. In future, the very large olefin plants will only be economic in a few parts of the world. In most others, the demands will be met more economically by building a number of rather smaller plants.

Definite dangers

Over the last decade, the size of olefin plants has risen dramatically from 70,000 tons/year to 500,000 tons. A 1m. tonner is technically feasible, but no one has built it and Professor Timm of BASF has publicly expressed relief that his company's plans for such a plant were not carried out. "There are definite dangers in having so large a plant at one location." Instead, the ROW cracker at Wesseling is limited to the conventional 450,000 tons.

With the larger plants, the lead time between investment decision and completion of construction is longer and the construction timetable itself becomes vulnerable to many outside influences. Thus large sums of capital can be tied up in an unproductive way for some years. It can be a long time before new plant is operating at full capacity and the lowest production cost achieved. Even worse, it can flood the whole market.

The industry is subject to worldwide inflation on costs, while continuing growth in demand exists worldwide, so does the threat of overcapacity remain. "Failure to strike the correct balance between co-ordination and competition could undermine the financial structure of the industry, with disastrous social and economic consequences," according to Mr. E. Werner, a managing director of Royal Dutch/Shell.

One factor that needs to be taken into account too is that 10 per cent. of the total capital cost of a new chemical plant now goes for anti-pollution equipment and environmental conservation devices. Another is that, unless the economics of chemical production become more attractive, there is no reason why the oil companies should channel their limited feedstock resources to this end. Indeed, to encourage future investment, there must be a sharing of the feedstock price escalation risks with the customer.

The present picture is of considerable co-operation by major chemical producers operating a network of plants, partly on a joint basis, partly without interlocking capital arrangements. These complexes are distributed over the U.K., Belgium, France, Germany and Austria. In each of these plants, as well as being a base for the regional market, an assortment of products is made and supplied on a supra-regional basis to the whole European market. This distribution of labour permits a high, continuous utilisation of plant capacity. In developing countries, anxious to exploit their raw material resources, as yet there is no local market and they cannot compete with plants in the highly industrialised countries because of freight costs.

Grave doubts

However, things are changing. The history of U.S. chemicals points a lesson. The U.S. petrochemicals industry developed on the east coast where the raw materials and markets lay and grave doubts surrounded the prospects for the Gulf coast. However, the abundant (until recently) supplies of feedstock and energy and low prices for them, plus the advantages of water transport overcome any qualms.

A similar picture is emerging in the Middle East. The oil producers will instal their own petrochemical industries, concentrating on first generation chemicals, thus utilising their vast raw materials and energy supplies. To-day, even ethylene and ammonia can be successfully transported by ship. This means that the 1980s will see the more sophisticated second and third generation chemicals being made in the U.S. and other developed countries and the producing countries will be making inroads into these secondary industries. The more sophisticated second and third generation products are less sensitive to raw material and energy costs than basic chemicals. Hence the trend towards greater emphasis on research and development applied to derivative, specialised chemicals.

Furthermore, the availability of large sums of capital to the oil-producing nations will inevitably entail further investment in the downstream products and also investment overseas, including, no doubt, the U.S.

Ethylene plants

In future, many if not most of the major new ethylene plants in Europe will be built and operated by several companies, such as the already mooted ICI-Norsk Hydro or ICI/BPCI ventures and the existing French Association du Steamcracking unit at Feyzin (a consortium including Elf Aquitaine, Solvay, Rhone-Progil). The industry is already noted for its incestuous relationships, particularly at the large port complexes such as Rotterdam, Antwerp, Fos and at Grangemouth, Feyzin, Pernis and Moerdijk, where there are innumerable over-the-fence exchanges.

In Japan there are many joint projects, supervised by MITI, particularly for ethylene. At Wesseling, West Germany, ROW (the child of BASF and Shell) started up its cracker this year. ROW supply butadiene and styrene to Deutsche Shell Chemie from plant designed and built by BASF, to feed Shell's vulcanised rubbers production.

Other newly announced multi-company ventures, including trans-national ones, include Du Pont (U.S.) and Rhone-Poulenc (France) for adiponitrile, for nylon 6,6 production in France; ICI (U.K.) and UERT (Spain) in a methylamines project for Spain; a $100m. Caribbean refinery for North Atlantic Oil (U.S.), Carbonafta of France and Techmashexport (USSR); Mitsui (Japan) are planning a $200m. complex for Vietnam; Sumitomo (Japan) and the Singapore government are co-operating in a 300,000 ton ethylene plant and downstream plants with other Japanese companies to come on stream by 1977.

Indonesia will have a $1,000m. petrochemicals complex, South East Asia's largest, by 1980, also involving a 300,000 ton cracker and related facilities. The ethylene plant will probably be owned by Japanese and Indonesian interests while the downstream units will be exclusively Japanese owned. It will utilise natural gas from Sumatra rather than naphtha as feedstock.

In the East bloc, these types of joint venture and exchange links are also common—the latest being a plan by Romania and Yugoslavia whereby the latter will supply 52,000 tons/year of ethylene and 50,000 tons of propylene to Romania while, in exchange, Yugoslavia purchases chemical raw materials.

The combinations are endless. In Italy, BP and ANIC have a joint synthetic proteins project. In Puerto Rico, Corco and PPG have a joint company, Puerto Rico Olefins Company, which gets feedstock from Corco for olefins production and in turn supplies raw materials, particularly ethylene, for PPG's vinyl chloride monomer and ethylene glycol plants at Guayanilla, a complex wholly owned by PPG.

In Iran, a joint venture of the State with Japan — Iran-Japan Petrochemical Compan —is planning a $70m. investment in styrene butadien rubber at Bandar Shahpur by 1977. Thailand has a joi project with Japan for a $280m. complex at Siracha by 1976. In Canada, SOAP is a $150m. 1,000m. lbs-year ethylene project at Sarnia for Du Pon Polysar and probably Unio Carbide Dow having lately withdrawn.

Undoubtedly, joint ventu projects will multiply in th future as capital financin problems increase and ris sharing becomes more essentia

Pipeline networks

Another significant feature the large and growing traff in chemicals with a trend bulk movements of large to nage products, which ha entailed increasing investme in pipeline networks. Th Spaghetti Bowl of Texas is th largest, involving 25 or so pr ducts carried by around 10 companies along 2,000 km. pipelines. This started wi transport of ethylene in 195 In Europe, the ARG gr principally involves ethylen moving between producers an customers in the Netherland West Germany and Belgiu and soon to include France Other products, such as prop lene, ammonia, chlorine, an vinyl chloride can be move this way and by 1974 the ne work will stretch 1,000 km.

In the U.K., an ethylene li connects ICI with Shell an depending on where the ne cracker is built, may we eventually connect eithe Grangemouth and/or Bagla Bay.

TABLE 1—EXPORT CONTRACTS BY WORLD AREAS

	All projects				In hand			
	1973		1972		1973		1972	
	No.	£m.	No.	£m.	No.	£m.	No.	£m.
West Europe	308	1,394	347	1,652	175	822	220	1,188
Middle East	119	925	88	831	88	705	75	782
East Europe	190	671	160	746	149	544	119	587
Far East	173	671	154	858	134	497	115	731
Latin America	131	489	111	702	97	343	73	337
North America	67	282	53	297	49	246	31	157
Africa	44	162	41	244	30	132	23	115
Australasia	31	80	27	100	19	62	16	76
TOTAL	1,063	4,574	981	5,430	741	3,451	672	3,978

Source: CAI Export Contracts Survey June 15, 1973.

TABLE 2—INVESTMENT IN WORLD AREAS BY PRODUCT SECTOR—(£m.)

	Plastics, fibres*	Heavy organics	In-organics	Petrol'm refining†	Ferti-lisers	Industrial gases
West Europe	67.3	301.2	86.0	373.0	122.5	55.0
East Europe	118.2	234.5	54.3	103.5	114.3	30.4
Middle East	51.2	34.3	9.3	436.1	198.5	4.2
Far East	77.0	141.2	31.2	165.1	227.0	16.6
North America	4.4	23.5	4.3	165.2	34.8	11.0
Latin America	45.3	111.0	7.6	206.0	84.5	2.3
Africa	6.5	0.7	9.5	47.5	49.3	7.2
Australasia	5.8	2.0	5.6	31.5	—	2.8
Total (£m.)	275.7	848.4	207.8	1,727.9	821.0	119.6
Total (per cent. of total investment)	8.2	18.5	4.5	37.8	17.9	2.6

* Category comprises plastics, synthetic rubber and synthetic fibre projects. † Including natural gas projects. Source: Chemical Age International Export Contracts Survey June 15, 1973.

Why tanker rates are 'ridiculous but credible'

By JAMES McDONALD, Shipping Correspondent

O-YEAR-OLD supertanker 35,000 deadweight tons, g about $30m. at contract sold last month for over without any lucrative r contract. Freight rates w so high that, on single s, medium-sized vessels upertankers can earn a of almost 700 per cent. reak-even operating costs. dition, there is a heavy d by U.S. oil companies artered tonnage to feed untry's energy demands.

t is the current picture oil tanker charter market. r rates for oil tankers are ir highest-ever level, and s in the tanker market— edly not always noted for te forecasting—can see no s decline in rates before pring.

main reasons for this led boom are the belated tion this spring of the nergy gap, and the panic d by the militancy of the n oil exporting nations. oid companies have l to charter tonnage. The s need for oil will not, of , be satisfied simply by a of chartering. But the y this spring eliminated sual summer setback in r rates.

mally there is a fall in freight rates during the er, followed by an autumn l. This has not happened ear. On the contrary, the shows the rise in rates ummer and the consequent large profits for tanker owners with ships free for charter.

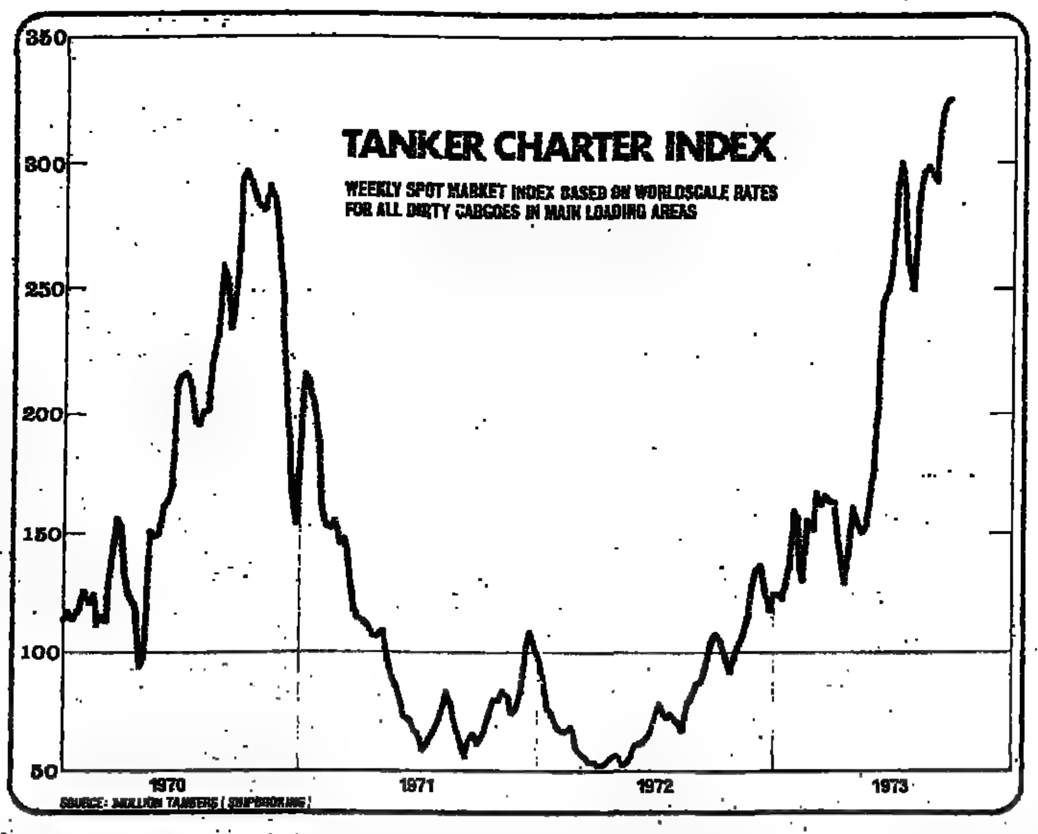
As a comparison at this time in 1971, the charter rate for oil tankers, according to the Mullion index, was Worldscale 57. Last year at this time the index was 96. At the end of last week it had reached a record 325. Yet on a single voyage, supertankers of 200,000 to 300,000 deadweight tons can breakeven on costs at charter rates between Worldscale 40 and 45.

Despite higher operating costs, profits in the tanker charter market at to-day's rates are therefore highly attractive. One broker instanced the case of a 250,000-tons supertanker, chartered for a year at a rate equal to Worldscale 175. Such a ship would need about $5,000 a day for operating expenses, amounting to about $4.4m. over a year. With an income over the year of about $26.3m. gross, the net return after operating costs would be about $22m.

Energy gap

A tanker broker has estimated that a second-hand supertanker in the 250,000-ton range, sold this year for about $80m., can earn about $10m. per round trip between the Gulf and the U.K. or Continent on a two-month basis. In a year, such a ship should be able to earn gross around $60m. at current single voyage rates. This makes sense of the $90m. sale last month of the A. P. Moller 285,000-tonner.

"The rates are ridiculous but credible," said a leading tanker broker, who also foresaw a continuing high level of rates through the winter and into next spring.



The broker's forecast was subject to there being no major interruption of supplies from the Gulf and Libya to western and U.S. customers. Assuming this, there will be still greater U.S. demand for oil from the Gulf and Libya to fill its energy gap in the next few years.

With ports able to accept tankers of only 80,000 tons loaded on its east coast, the U.S. will have to consider several costly alternatives during this time. In the long term, it may dredge channels and enlarge ports to take tankers up to 300,000 tons on the east coast. In the short term, it must consider offshore transhipment buoys or transhipment terminals in the West Indies where 300,000-tonners can off-load into tanks or directly into smaller tankers, so creating yet more demand on the tanker market.

Fortunes in the shipping industry are traditionally cyclical, and professionals tend to "sell out" at the peak of a market. There is certainly a peak now, but in the circumstances even the professionals are reluctant to take their profits on the spot market and accept safer three to five-year timecharter contracts.

In this situation some tanker owners are finding that it may be as profitable—and safer—to sell the contracts for ships they have on order with reasonably early delivery. A supertanker ordered two years ago with delivery next year might command a premium over the contract price of up to 75 per cent., if only because most of the world's shipyards have full order books up to 1977 and 1978.

One example of this concerns the major British shipbuilder Swan Hunter, which entered the ship financing, leasing and chartering field this year through its partnership with Maritime Fruit Carriers of the U.S., in a new company, Swan Maritime. This company, in which Swan Hunter has a 25 per cent. interest and MFC the remainder, has placed an initial order for 20 ships, worth about £150m., with the Swan Hunter group. These will be supertankers or ore-bulk-oil (OBO) carriers for delivery between 1974 and 1976.

With the current demand for tankers for early delivery to take advantage of high freight rates, Swan Maritime could make a considerable profit (and there are suggestions in the trade that it might do just this) in selling some of these ships for 1974 or 1975 delivery to other shipowners. Meanwhile, providing Swan Hunter's tenders remain competitive, Swan Maritime intends to order more tankers, OBO's liquid natural gas and petroleum gas carriers to bring total orders to over £500m.

Mr. Tom McIver, Swan Hunter's managing director, says: "Shipbuilding has been on the losing end of the wicket for 30 years. We hope to share more in some of the cyclical profitability of our customers," and its arangements with MFC are a means whereby profitable freight rates can work backwards down the chain to benefit the shipbuilders.

The dry-cargo tramp shipping market has not shown such spectacular rises in rates over the past year, but they are still at levels which offer considerable profits. Here too, events have confounded forecasts that rates would fall from the spring peaks.

Large U.S. grain sales to Russia in the middle of last year signalled a turn-round in the dry-cargo freight market. With a better Russian grain harvest this year, the USSR may not have a similar influence on rates, but the possible gap in demand is being filled by imports of grain and foodstuffs into the Indian sub-continent at high freight levels.

Outlook

In the Far East, mainly because of a considerable shortage of tonnage, "dramatic" rates have been paid by charterers to cover August and first half of September positions, according to one leading broker. Tonnage has been fixed at around $8 per ton, basis delivery Japan, for timecharter trips to the Continent. Nearer $9 is now being asked for similar trading—about $2 to $3 more than the profitable levels of a month ago.

Brokers commenting on the dry cargo freight market seem agreed that the outlook for tramp-ship owners remains very healthy for the rest of this year and perhaps well into next year. For despite a decline in transatlantic grain rates from $12.5 to $11.75 per ton in August, other rates reflect the trend more accurately according to Eggar Forrester, the London brokers. In the U.S. Hampton Roads to Japan coal trade, rates last month reached a record of $16.50 per ton, compared with $12.97½ in July, and contracts were negotiated at between $9.25 and $9.50 for 1974 commencement for one or two years' trading.

In the period charter dry-cargo market there has been a steady demand for tonnage at rising rates. Ships in the 25,000-27,000 deadweight tons range are obtaining about $7.25 per ton for 12 months' trading, compared with about $6.00 per ton at the beginning of August.

It is usually unwise to forecast too far ahead in the shipping industry. But in the tanker sector, forecasts of increasing demand for energy, and on the dry-cargo side, forecasts of expanding world trade make ship-owners unusually confident about the future.

Certainly there is no hidden surplus of shipping which could enter the market unexpectedly and upset current rate trends. At the end of August, according to U.K. Chamber of Shipping statistics, only 173 merchant vessels aggregating 795,000 gross tons and representing well under 0.5 per cent. of the world merchant fleet, were lying idle. This was the lowest unemployed total of merchant shipping since January, 1971.

abour News

eath meeting sought n London teachers

OUR LABOUR STAFF

ational Union of Teachers eek an early meeting with ime Minister following the Pay Board report on lies which the union is directly responsible for eatened breakdown of ion services in London.

meeting of the NUT ve at the week-end decided s for urgent payment of es in the £118-a-year allowance for around eachers.

ial case'

xecutive "totally rejected" Board's anomalies report ing to recommend "special increases for London s which the NUT claims necessary to curb the ping teacher shortage.

has led to the recent iction of part-time educa- 18 schools affecting 12,000

The threatened break- n the capital city's educa- ervices "stems directly he Pay Board's failure to nend an increase in the allowance," says the

hors leaders believed they ablished a case for raising lowance to £300 a year the Government's pay in submissions to the Pay in July. They claimed that nent on allowances would een reached last Novem- it for the intervention of y freeze.

Board's report to the Government recommended the correction of anomalies which had arisen either because the pay freeze had broken a link between pay groups or because it had upset formal pay procedures used to compare one group with another.

As part of its London allowance campaign, the NUT is calling for an early meeting of the teachers' Burnham Committee. It also plans to organise a deputation to meet Mrs Margaret Thatcher, Secretary for Education, and to call a meeting of its Members of Parliament.

Approaches will also be made to other teachers' organisations and to public sector unions disgruntled with the Pay Board's failure to satisfy similar "special case" claims.

Several other unions are planning to follow up the Board's report with pay claims on behalf of workers who, they believe, satisfy the report's criteria for special increases.

General demand

Leaders of 47,000 gas workers are likely to decide this week to lodge a claim, while unions representing 27,000 water workers will discuss early next month whether to lodge a separate claim for special payments or to include the demand in a general wage claim to be submitted in November.

Both groups claim established pay links have been broken with electricity supply manual workers' pay settlements.

nion conference seeks ction over strike case

OUR OWN CORRESPONDENT

ERPOOL TRADES Council ence at the week-end for a national day of rial action on October 3, 24 men are to appear in at Shrewsbury on charges the 1875 Conspiracy and tion of Property Act. It art of a six-point resolu- pproved without dissent at aturday meeting attended re than 800 delegates from n, the provinces, Scotland ales.

conference also proposed ass demonstration in sbury to coincide with the g arising out of picketing ts in North Wales during the national building workers' strike a year ago.

A senior member of the Mersey port shop stewards committee told the delegates that it would recommend a total stoppage of the 7,000 dockers at a mass meeting to be called shortly. At a similar meeting in Liverpool a week ago only 800 dockers attended and no decision was taken.

A call was also made for support from the car industry on Merseyside, but it is not clear how much actual support there will be. It was announced that £1,000 had either been raised or promised from the delegates to launch a fighting fund.

ıbe-men woo public support

NATIONAL Union of Rail- n is to run a leaflet cam- in London on Thursday for public support for wage negotiations aimed ing the staff shortage on n Transport.

leaflet explains that the cent. cut in services on ondon Underground since s due to a chronic shortage T among train grades. It says that Government restrictions on wage negotiations must be lifted to give a chance of success to talks on London Transport's nine-point plan to tackle the staff shortage.

Devised by the NUR's North London district council, the leaflet urges people to write to the chairman of London Transport and to MPs demanding that immediate action be taken to speed the wage talks.

nfair sackings: 'cash for 97%'

THAN 97 per cent. of oees found to have been y dismissed under the rial Relations Act have d compensation, it is d in a book published to-

author, Mr. S. D. Ander- says that in the first year Act only about 2 per cent. eir jobs back.

In his book, Unfair Dismissals and the Law, which is published by the Institute of Personnel Management, Mr. Anderman adds that, although the Act requires re-engagement to be considered by tribunals before compensation, in practice an award of compensation has been the most common remedy.

National savings hit by interest rates

BY DONALD MACLEAN

NATIONAL SAVINGS receipts continued to exceed withdrawals in August, as revealed by the preliminary returns, which show net receipts at £24.8m., compared with £47.8m. in the same month last year.

Members of the National Savings Committee are "perturbed by the effects of unprecedented conditions in the fixed interest security market," Sir Robert Bellinger, president and chairman of the committee, said. But the members "consider that, in view of the holiday season, National Savings have withstood the initial impact of the strong competition very well."

Sharply increased competition for the movement has followed the July official measures to raise interest rates in general, largely to strengthen sterling.

Since mid-July, major banks have increased the rate they pay on small deposits from 6½ per cent. to 9½ per cent.—a level they have been asked by the monetary authorities not to exceed in the case of deposits under £10,000. The building societies have in the same time reversed an earlier decision to lower their major investment rate from a tax-free 6.75 per cent. (or 9.64 per cent. grossed-up at the standard rate of tax), and have decided on an increase to 7.5 per cent. tax free (10.71 per cent. grossed-up) from October 1.

At the same time, small savers are offered 10¾ per cent. to 11 per cent. by local authorities on relatively small sums for a year or more, whereas in mid-July 9½ per cent. was a common bid for similar periods.

Shortfall

The difficulties facing the National Savings movement are highlighted by the fact that the net savings of £49.5m. over the first five months of the financial year, excluding undistributed interest, amounted to a sum less than the £53.6m. required to meet interest payments on National Savings Certificates.

In August alone, there were net withdrawals of £1m. from the movement if undistributed interest is excluded.

Easily the most popular National Savings channel at the moment is the British Savings Bond, which brought in £9.9m. net in August, and £39.5m. over the April-August period. Over its full-term of five years the 8½ per cent. Bond earns interest of 9.24 per cent. grossed up at the standard tax rate.

Table Page 37

Kenya claims £7.5m. bill as IMF host

BY JOHN WORRALL NAIROBI, Sept. 23.

KENYA is already claiming £7.5m. in foreign exchange from the World Bank-International Monetary Fund meeting, which begins here to-morrow. That is well over the cost of the Kenyatta Conference Centre, where the five-day meeting is being held, put at £4m. The figure was given to-day by a former executive director of the IMF, Mr. Maurice P. Omwony, and confirmed by Kenya Central Bank sources.

Mr. Omwony is now on the staff of the IBM World Trade Corporation in Kenya, and was partly instrumental in negotiating for the World Bank conference to be held in Nairobi. Quoting the £7.5m. figure, to-day's Nairobi Sunday Post said the estimated earnings for Kenya of the conference were about 10 per cent. of Kenya's total exchange earnings from regular exports last year. A conference source, however, while not disputing the figure, said that put against it must be the cost of imported necessities, equipment and luxuries for the comfort of the delegates, such as sophisticated telecommunications equipment. "Whisky alone will be a big figure," he said.

Nevertheless the Kenyans have a right to be optimistic, with 3,500 big-spending officials, delegates and observers, plus many wives, and over 500 journalists staying in Nairobi for at least five days. Many have booked for expensive safaris after the conference. Part of the expenses of delegates will be met by the World Bank, which is paying portions of cost in gold to Kenya.

To-day there was a police swoop on backdoor money changers trying to cash in on the situation. Considerably more than current exchange rates are being paid for sterling and dollars.

World Banker robbed

Security was tightened at the conference centre to-day as Finance Ministers and bankers continued to arrive in Nairobi. A police post has been established in the heart of the centre.

This did not prevent the daylight robbery of $150 from a World Bank Executive director, Mr. William B. Dale, an American, yesterday. He was stopped in the street by two well-dressed men posing as policemen who said they were checking up on currency violations and asked to see what money he was carrying. When Mr. Dale took out his wallet they snatched it and ran off.

Only two U.K. ships idle

THE CHAMBER of Shipping reports to-day that only two U.K. ships, totalling 11,000 tons, were laid up for lack of employment at the end of August.

This is the lowest amount of idle U.K. tonnage for almost three years. On October 1, 1970, no British ships were reported to be laid up.

Throughout the world 173 merchant ships, totalling 795,000 tons, were laid up on August 31, the lowest figure since January 31, 1971, when 155 ships of 743,000 tons were idle.

REMPLOY PLAN ACCEPTED

Glasgow planning sub-committee has given Remploy permission to construct a single-storey factory in the Springburn industrial estate with a floor space of 33,000 square feet.

It is hoped to employ about 170 people on steel furniture making.

Tyne/Wear radio

FINANCIAL TIMES REPORTER

METROPOLITAN Broadcasting, the local radio group headed by Sir John Hunter, chairman of Swan Hunter, is to be awarded the Tyne/Wear radio contract, the Independent Broadcasting Authority confirmed yesterday.

The news comes two months after the IBA named Metropolitan Broadcasting as the leading contender of the six applicants for the franchise.

The move is still subject to contract, and the full composition of the company will not be announced until all the details are completed. Broadcasting is likely to start next summer, and programme plans will not be published until then.

As well as occupying the post of chairman, Sir John Hunter is also Metropolitan Broadcasting's chief executive.

Its general manager is Mr. Bruce Lewis, for the past five years a presenter and newscaster with Tyne Tees Television.

Among the company's other directors are Mr. Bill Elliott, Conservative MP for Newcastle upon Tyne North, Mr. Jim Harper, regional secretary of the Union of Construction, Allied Trades and Technicians, and Mr. Paul Nicholson, joint managing director of Vaux Breweries.

Nixon more unpopular

PRESIDENT NIXON'S popularity rating has slipped further despite his efforts to restore confidence in his leadership, according to a U.S. public opinion poll published yesterday.

In a nationwide Gallup poll, only 35 per cent. of those interviewed approved of the way he was doing his job. This is 3 per cent. lower than in the previous poll, taken shortly after Mr. Nixon made a television speech on August 15, launching an all-out effort to put the Watergate affair behind him.

The poll also showed a majority still believe he knew in advance of plans to "bug" the Democratic Party headquarters last year, or condoned the attempted cover-up.

The poll is published on the eve of a new round of televised Senate hearings into the Watergate affair and related political activities during the 1972 Presidential Election campaign. Mr. Samuel Dash, chief counsel for the Democrats, said the hearings would try to determine the extent of efforts by Mr. Nixon's supporters to undermine the Democratic opposition.

COMPANY NEWS + COMMENT

North Eastern Timber profit upsurge

PROFITS IN excess of £0.67m., against £0.4m., are forecast by North Eastern Timber for 1973.

On an external turnover up sharply from £4.42m. to £7.26m., first half pre-tax profit expanded from £150,300 to £335,100. And in spite of soaring interest charges, the directors expect that, in the absence of unforeseen circumstances, profit for the second half will exceed that for the first.

The increased profit for the period reflects not only the higher sales but a favourable variation in their composition in that a larger proportion was derived from subsidiaries whose profitability is traditionally higher than the average for the group, they state.

The interim dividend is limited to 1.05p per 20p share net—equal to last year's 1.5p gross. The 1972 gross total was 2.8470p.

	Half-year 1973 £	1972 £
External turnover	[illegible]	[illegible]
Profit before tax	335,100	150,300
Taxation	125,000	[illegible]
Net profit	210,100	[illegible]
Minorities	[illegible]	[illegible]
Interim dividend	[illegible]	[illegible]

* Net on £651,029 [illegible] gross on [illegible].

● comment

North Eastern has considerably more than doubled six-month profits on a rise of two-thirds in sales, so the group is not lagging behind any in the great timber profits race. Taking £700,000 pre-tax as a minimum target for the year suggests a prospective p/e of 8.8 net which represents a premium of a couple of points over the big softwood companies. But then North Eastern has some sizeable non-timber interests while most of its lumber activities are heavily related to the hardwood, plywood and veneer fields with all that implies for a cushion against any downturn in residential housebuilding.

HIGHLIGHTS

The new week sets out in fine style with to-day's batch of interim statements from **Fisons, Ready Mixed Concrete** and **Simon Engineering.** On Thursday there is further red meat in the shape of **Cadbury Schweppes and Dickinson Robinson Group** not to mention **George Wimpey** who all, likewise, produce six-month progress reports. Finally, there is **Laporte Industries** which puts out its interim on Friday.

Consolidated Plantations

Any major depression in rubber and palm oil prices seems unlikely, in the foreseeable future, **Consolidated Plantations** chairman Mr. D. W. Pinder, tells members—but he adds it would be foolish to attempt to forecast prices a year from now, although indications are of a period of relative price strength.

Prices were depressed during most of the period to March 31, 1973, but, however, towards the end they began to move upwards.

Pre-tax profit for the period —April 18, 1972, to March 31, 1973 —was £1.77m. (£1.85m.) and the final dividend is 16.87 per cent. less Malaysian tax. The 5.5 per cent. net interim was paid in the U.K. before the transfer to Malaysia.

Outlining the overall impact of the acquisition of the Seafield Estates, Mr. Pinder says the area under rubber has risen from 48,000 to 69,000 acres and that under oil palms has more than doubled from 22,000 to 50,000 acres. If Seafield had been included for the year 1972-73 crops of oil palm products and rubber would have amounted to 76,000 tons and 84,000,000 lbs (40,000 tons and 40,000,000 lbs actually harvested), he points out.

The current accounting period is being extended to 15 months ending June 30, 1974, to align the financial year with the parent company, Sime Darby Holdings.

Including recent acquisitions it is proposed to replant about 5,000 acres with oil palms this year as well as 800 acres with cocoa. Soil suitability aside it is part of the basic strategy to place emphasis on food crops and the long term aim is to reduce rubber acreage to around 30 per cent. of the total leaving the balance in oil palms, cocoa and possibly other edibles which are continually being evaluated.

Meeting, Kuala Lumpur, October 15.

Chairman's statement, Page 14

Cussons' warning on costs

Increased fat prices—more than twice the cost per ton than a year ago—will affect the current year profit of Cussons Group, says the chairman, Mr. S. H. Cussons.

He would "welcome" a return to a more stable economic climate when again the U.K. profit would more adequately reflect the "prominent market position which the company's products enjoy"

As reported on August 24 group pre-tax profit for the year to April 1, 1973, was a record (£887,207 (£500,537) for 53 weeks) and the gross dividend is 2.1p (2p) per share. Turnover expanded from £9.39m. to £10.84m.

Profits recovered from their recent downward trend. A new major product was launched, an overseas acquisition was made of a company which has considerable potential, and the share of the principal product, Imperial Leather Soap, in the home market, reached the highest point in its history.

Soaps and toiletries, household products, etc., contributed £10.38m. to turnover and £902,022 to profit. Travel goods and packaging incurred a loss of £44,755 in a turnover of £454,462.

A geographical breakdown of turnover and profit (in percentages) shows U.K. 72.1 and 67; Europe 3.7 and 4.9; Africa 5.2 and 11.1; Asia 5.5 and 7.4; North and South America 3.6 and 5.4; Australasia 9.9 and 4.2.

Meeting, Manchester, October 16, noon.

Zambia Copper

Zambia Copper Investments has been advised that the trustee for the 8 per cent. Zimco Bonds 1978 has received payment in full of the outstanding capital on the accrued interest on the bonds, and that arrangements are being made to pay the sums due to bondholders on October 1, 1973.

As previously announced, the company is now obliged to repay in full its own 1978 loan stock, and arrangements are in hand to redeem the stock on October 17.

In view of the arrangements the seventh repayment of capital and interest as announced on September 6 will now fall away.

Details, Page 10

Peak year for Gordon and Gotch

On turnover up from £16.7m. to £18.8m., pre-tax profit of **Gordon and Gotch Holdings** rose from £227,888 to a record £270,450 in the year to March 31, 1973.

At the interim stage, when profit was up from £111,200 to £125,000, the directors expected the rate of profit would continue throughout the rest of the year.

As forecast the final dividend is lifted from 11 per cent. to 12 per cent., raising the gross total from 20 per cent. to 21 per cent., the maximum increase permitted.

The dividend total is shown to be covered approximately 2.4 times by earnings. Last year's 20 per cent. was covered 1.9 times.

The company exports periodicals, newspapers and books, acts as shipping and airfreight forwarding agents and travel agents, and operates packing warehouses and a computer service bureau.

Birmingham and District Investment

Birmingham and District Investment Trust (in the British Electric Traction group), is effectively maintaining its interim dividend for the year 1973—the payment is 7 per cent. net, or 10 per cent. gross. Total for 1972, adjusting for the two-to-one scrip, was 35 per cent.

First half gross income totalled £838,657, against £798,938. Figures reflect the change to the imputation tax system whereby tax credits attaching to franked investment income are left as a charge against gross revenue but dividends payable are shown at the cash cost exclusive of the attaching tax credits.

	Half-year 1973 £	1972 £
Gross income	838,657	798,938
Expenses inc. deb. int.	[illegible]	[illegible]
Profit	514,767	735,506
Taxation	272,000	8,000
Profit after tax	242,767	746,306
Interim dividend	205,108	*[illegible]

* Gross.

Charcon in Scotland

Charcon, the construction industry subsidiary of Charterhouse Industries, has set up a new company, **Charcon Scotland,** to handle the manufacture and sales of the group's products in Scotland.

Charcon now has six operating companies in the U.K. and one in Holland with 16 factories and an annual turnover in excess of £20m.

C. Early first half upturn

FIRST HALF pre-tax profit of blanket manufacturers, etc. **Charles Early & Marriott (Witney)** increased by 11 per cent. to £152,527.

Production is now increasing and if this trend is maintained and exports continue on their present advantageous basis then the directors expect a "moderate" improvement for the full year on the £220,745 for the year to January 31, 1973.

In the export field a contract with an important French mail order concern has recently been obtained. This represents a major breakthrough within the EEC for fiberwoven blankets, they state.

Sales of Warlord floor covering continue to expand both at home and overseas.

An interim dividend of 0.315p per 10p share, equal to last year's 0.45p, is declared. The 1972-73 total was 2.1p.

	Half-year 1973 £	1972 £
Profit	152,527	137,446
Taxation	76,000	55,000
Net profit	76,527	82,446
Preference dividends	3,073	3,250
Interim ordinary*	17,849	25,489

* Net (gross).

● comment

Charles Early is 11 per cent. ahead pre-tax after six months and projecting that sort of growth for the full year's points to net earnings of 3p and a prospective p/e at 26p of around 8½ times. On trading grounds Early is plainly not an exciting share for it can never be easy to work up enthusiasm for the blanket business. Yet the group now reckons to have a foot in the European sales door, its historic yield is over 8 per cent. and net worth is perhaps as much as 12p more than the market is paying for the shares at the moment.

Longton Transport

Mr. E. G. Dale, chairman of **Longton Transport (Holdings)** told the annual meeting that the current year had got off to a good start.

They had recently concluded an arrangement with Massey Ferguson to take in the whole of Lancashire, North Cheshire, Cumberland and Westmoreland against which they have relinquished South Staffordshire, Shropshire and North Wales.

This extended considerably "the area over which we shall market that Company's industrial and construction machinery," the chairman added.

Sales of motor cars and commercial vehicles were restricted by delays in delivery from manufacturers but "we have a full order book for all classes of vehicles."

Meeting, Page 32

ANTONY GIBBS

Subject to approval at to-day's extra-ordinary meeting of the proposed change of name of Antony Gibbs and Sons to Antony Gibbs Holdings, and receipt of the relevant Certificate from the Registrar, the new name will be used as from to-morrow.

It is intended that a new wholly owned subsidiary, to be called Antony Gibbs and Sons will be incorporated, which, under a management agreement, will manage the banking activities of Antony Gibbs Holdings. Further details will be sent to members when this phase of reorganisation has been agreed.

Mr. G. V. Burton, chairman of Fisons, due to announce its interim results to-day.

DIVIDENDS ANNOUNCED

	Current payment %	Date of payment	Corresponding div. %	Total for year %	Total last year %
Charles Early ....int.	0.32†‡	Feb. 4	0.45	—	2.1
North Eastern Timber int.	1.05†§	Jan. 17	1.5	—	2.85

* Equivalent after allowing for scrip issue. † Pence per share. ‡ On capital increased by rights and/or acquisition issues. § Net equal to last year's gross.

Countryside Props. expansion

NET ASSETS of Countryside Properties have substantially increased from both the offer for sale last November and retained profits, the chairman, Mr. S. Bobroff reports. At June 30, 1973, they stood at £2.58m. (after deducting corporation tax of £310,000 payable after June 30, 1974) compared with £0.44m. a year ago.

Borrowing facilities have also increased, and the company continues to have the benefit of special allocations from some building societies to help its residential development programme.

Mr. Bobroff adds that discussions with institutions are expected to result in long-term funds to finance commercial and industrial developments intended to be retained for investment.

"In the light of all these considerations, we are confident that the group is in a strong position to achieve substantial growth in the years ahead," he says.

Pre-tax profit for the past year, reported on September 12, was £1.25m., exceeding the £1.1m. forecast in the offer for sale. Dividends totalled 6.5p gross, compared with a forecast 6p.

Turnover and profitability could have been "substantially increased", had adequate building facilities been available, the chairman comments. And so the directors are considering establishment of a construction division, or the acquisition of an existing contractor.

Cost of land held at June 30, 1973, was £6.03m. (£2.31m.). Although it is generally policy not to sell undeveloped land, certain land may be sold in special circumstances and in order to maintain a satisfactory balanced holding for the future, Mr. Bobroff points out. The proposed Land Hoarding charge is not expected to have adverse effects.

Meeting, Winchester House, E.C., October 17 at 11 a.m.

Brooks Watson progress

DUBLIN builders' merchants, maltsters and agricultural engineers **Brooks Watson Group** is hoisting its interim dividend from 2½ per cent. to 7 per cent. The directors anticipate a total of not less than 17 per cent., against 10 per cent., given continuance of the favourable trends of the first half.

The higher payment comes from pre-tax profit of £856,377 (£20,661) for the period to June 30, 1973.

The 1973 figures cover five months trading by Brooks Thomas companies and six months by the acquired Joshua Watson companies—taxable profit for the enlarged group has been forecast to reach not less than £1.25m. for the current year.

It is proposed to change the company year-end from January 31 to December 31.

	Period to June 1973 £	1972 £
Turnover	15,461,000	5,251,000
Pre-tax profit	856,377	20,661
Tax	395,331	2,200
Net profit	461,046	18,461
Attributable	432,787	18,461

BOARD MEETINGS

[illegible] following companies have notified dates of Board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available whether dividends concerned are interims or finals and the sub-division shown below is based mainly on last year's timetable.

TO-DAY

Interims—Brent Chemicals International, Brierleys Supermarkets, Fisons, Gough Bros., International Investment Trust of Jersey, Metalrax, Pataling Rubber Estates, Ready Mixed Concrete, Simon Engineering, John C. Small and Tidmas, Supra Chemical and Paints, Tilbury Contracting, Tootal, H. Young (Motors).

Finals—Ben Bailey Construction, Campari, Leisure and General, Ramar Textiles, Strong and Fisher.

FUTURE DATES

Interims—	
Cakebread Robey	Oct. 1
Greef-Chemicals	Oct. 10
Refuge Assurance	Sept. 27
Rosedimond Investment Trust	Sept. 26
Wolstenholme Bronze Powders	Sept. 26
Finals—	
Change Wares	Sept. 27
Muar River Rubber	Sept. 25
Renong Tin Dredging	Sept. 25

RESULTS AND ACCOUNTS IN BRIEF

W. G. ALLEN AND SONS (TIPTON) [illegible]—Results, year to March 31, 1973, and one-for-[illegible] scrip issue proposed, reported August [illegible]. Group fixed assets [illegible] ([illegible]). Net current assets [illegible] ([illegible]). Chairman expects further progress this year which has started well. Meeting, Tipton, October 18, at 11 a.m.

BROWN, MUFF AND CO. (department stores)—Interim results already known. Chairman reports, as expected, sales before April 1 were given considerable boost by pre-VAT spending, but sales since that date have not shown same improvement on last year. It is very difficult to predict results for year as a very large proportion of sales concentrated into last few months and likely effect of Phase III is not yet known. Extended store at [illegible] making good progress and directors confidently expect satisfactory overall performance during the remainder of year.

DOORNFONTEIN GOLD MINING COMPANY—Results, year to June 30, 1973, already known. Fixed assets [illegible] ([illegible]). Current assets R15.64m. ([illegible]), liabilities R11.05m. (R6.16m.). Meeting, Johannesburg, October 18.

EAST SUSSEX ENGINEERING GROUP—Group profit before tax for the six months to June 30, 1973 £200,747 ([illegible]). Estimated tax £91,000 ([illegible]). Net profit £109,747 (£107,952). Interim dividend 0.385p net—5.5 per cent. [illegible]. Cost of dividend is [illegible]. Annual sales trend, as forecast 25 per cent. ahead of last year [illegible] at greater rate and [illegible] of current [illegible] improved by only 10.5 [illegible]. Any increase in final dividend [illegible] restricted to any [illegible] and [illegible] prevailing at that time. [illegible] confident that year's results will, subject to unforeseen circumstances, at least maintain the improvement shown at half-way.

ELECTRICAL AND INDUSTRIAL INVESTMENT (B.E.T. Group)—For half-year to June 30, 1973, gross income [illegible] ([illegible]). Tax £42,000 (nil), leaving net profit £143,858 ([illegible]). [illegible] due to imputation tax system whereby tax credits attaching to franked investment income are left as a charge against gross revenue and dividends payable are shown at the cash cost exclusive of the attaching tax credits available to shareholders.

H. AND J. QUICK GROUP (Ford main dealers)—Interim 0.5145p net—0.735p gross (0.7p and 1.4075p total). [illegible] turnover record for six months, an increase of slightly more than 10 per cent. Trading profits increased by slightly less than 10 per cent. Higher cost of money and changed method of financing vehicle purchases introduced by Ford Motor Co. [illegible] with higher tax leaves profit, after taxation, at £116,000 (£115,000). [illegible] demand for vehicles [illegible] but supply continues to be [illegible] factor. Based on orders, future looks promising. "Energetic efforts are being made to diversify outside the motor trade and some very interesting propositions continue to be investigated," chairman says.

KLOOF GOLD MINING COMPANY—Results, year to June 30, 1973, already known. Fixed assets R79.72m. (R74.21m.). Current assets R22.87m. (R9.30m.), liabilities R11.48m. (R6.46m.). Meeting, Johannesburg, October 18.

LIBANON GOLD MINING COMPANY—Results year to June 30, 1973 already known. Fixed assets R25.77m. (R28.63m.). Current assets R16.32m. (R11.69m.), liabilities R10.36m. (R7.77m.). Meeting, Johannesburg, October 18.

MORAN TEA HOLDINGS—Results year ended March 31, 1973 already known. Pro-forma balance sheet at March 31, reflecting sale of Week Street property, shows net tangible assets £890,942, including fixed assets £572,542, investments £150,793, and net current liabilities £61,443. On August 31, secured bank borrowings £527,937 and acceptance credits £106,899. Chairman says intended that major part of U.K. resources should be employed in property sector here, net proceeds of Week Street sale will be used for that purpose. Renewal, extension and development of plantation interests in India continues. Meeting, Sir John Lyon House, High Timber Street, E.C., October 12 at noon.

QUEENS MOAT HOUSES—Interim dividend 5.5 per cent. net equal to [illegible] 7½ per cent. gross. Turnover half-year July 15 1973 £[illegible] (£1,247,000). Profit £259,000 (£144,000), less interest £135,000 (£45,000), and taxation £47,000 (£39,000), leaving net profit £77,000 (£60,000). Earnings 35p (3sp) per share. Figures for 1972 did not include any contribution from the Moat Houses Group in past half-year policy on depreciation has been 10 per cent. per annum on a straight line basis (5 per cent. on comparative figures of previous interim statement). All establishments functioning satisfactorily—the Jason's Carving Room at Brentwood is showing a very satisfactory return in its first year of trading. Anticipated that four further units of this type will be open by the end of this year. Included in profits before tax is a capital profit of £100,000.

RADLEY FASHIONS AND TEXTILES—Results year to February 28, 1973, and observations on prospects reported August 13. Group fixed assets £171,964 (£209,387). Net current assets £199,[illegible] (£156,071). Meeting, Winchester House, E.C., October 16, noon.

SOUTHERN KINTA CONSOLIDATED—Final dividend 4p (equivalent 5.714p gross) making 9.464p gross year March 31, 1973 (9.575p). Profit £1,[illegible] (£1,163,742) plus surplus on third buffer stock £86,295. Taxation £679,932 (574,000). Credit transitional relief £70,000 (£65,000). Dividends £706,440 (£721,590), unappropriated £682,095 ([illegible]).

WALBROOK INVESTMENT TRUST—First and final dividend of 0.3625p per Ordinary share, for the year ended July 31, 1973. Income £157,987. Expenses £25,924. Interest payable £111,779. Revenue before tax £40,264. Tax £15,496. Revenue after tax £24,766. Dividend £22,500. Carried forward £2,266. Earnings per 25p share 0.62p. Company made public July 1972.

WEST DRIEFONTEIN GOLD MINING COMPANY—Results, year to June 30, 1973 already known. Fixed assets R109m. (R108.16m.). Current assets R77.11m. (R49.16m.), liabilities R62.14m. (R39.47m.). Meeting, Johannesburg, October 18, noon.

ISSUE NEWS

CFP seeks London quotation

THE full prospectus issued in connection with the application to the London Stock Exchange for quotation for 13,886,769 "B" shares of Compagnie Francaise des Petroles is published to-day. It is anticipated that dealings will start on Thursday, September 27, 1973.

Compagnie Francaise des Petroles (CFP) was founded in 1924 as an oil exploration and production company. It has now grown to be the holding company of a fully integrated multinational group generally known as "Total," which is engaged in all sectors of the petroleum industry.

Group consolidated profit after tax and minorities has increased steadily from Frs.442m. in 1968 to about Frs.578m. for the year 1972. Unaudited profit for the first six months of 1973 amounted to Frs.252m., an increase of 10.5 per cent. over the figure for the first half of 1972.

The share capital of CFP is divided into 100,745 "A" and 21,273,059 "B" shares. The French Government holds 95.9 per cent. of the "A" and 34.7 per cent. of the "B." The "B" not held by the French State have be[en] quoted on the Paris stock e[x]change since 1929.

The directors feel that th[ey] should be able to report 1973 be another satisfactory year f[or] the Total group.

The introduction has be[en] arranged by Morgan Grenfell a[nd] Co. and Banque de Suez (U.[K.]) with Cazenove and Co. as broke[rs].

Particulars, Pages 38-41
See Lex

HAMMILL BRICK

Hammill Brick announces t[hat] 697,109 new Ordinary sha[res] allotted to holders under recent rights issue were paid by 3 p.m. yesterday. In accordan[ce] with the terms of the issue 783,824 12½p shares at 60p, balance number not taken have been sold for their bene[fit] and cheques for the premi[um] received, after all expenses sale, will be posted to relevant holders on October. The Underwriters were required to take up any sha[res] under the underwriting arran[ge]ments.

Triplevest to earn and pay more

CURRENT estimates indicate that total gross revenue of Triplevest for the year to February 28, 1974, will exceed the £1.23m. of 1972-73, and the final distribution payable in April will be about some 1.73p gross on Income shares making a total of about 4.73p against 4.035p.

Meanwhile an interim of 2.14p gross—1.498p net—is declared. A special interim of 0.85p gross has already been paid. Gross revenue for the first half year rose from £733,742 to £844,323.

	Half-year 1973 £	1972 £
Franked inv. income ...	684,971	608,152
Unfranked ...	121,393	111,918
Bank interest ...	37,979	13,672
Total revenue ...	844,323	733,742
Interest, etc. ...	127,926	123,927
Revenue before tax ...	716,397	609,815
Taxation ...	239,885	237,074
Net revenue ...	476,512	372,741
Tax relief ...	87,068	235,659
Distributable* ...	563,580	608,400

* Due to changes in the tax system the figures are not comparable.

Net assets at August 31, 1973, were £28,338,477 (£30,896,537) giving an asset value of 272½p (315p) per £1 Capital share.

FT Share Information Service

The following securities have been added to the Share Information Service appearing in the Financial Times:—

Hindson Print (Section, Pa[per] Printing).
Sainsbury (J.) (Sect[ion] Foods).
Sterling Industries (Secti[on] Industrials).

Customagic betters forecast

STRETCH SEAT COVER ma[nu]facturers Customagic Manufac[tur]ing has bettered its forecast more than £220,000, by turn[ing] in a pre-tax profit of £252,668 the year ended April 30, 1973, previous year's figure £122,432.

At half way, when the fore[cast] was made, profit was up f[rom] £32,448 to £97,471, and an inte[rim] dividend of 10 per cent. gross paid, the first since 1969.

The directors are recomme[nd]ing a 20 per cent. gross final lift the total to 30 per cent. c[om]pared with 5.5 per cent. last [year].

	Year 1972-73 £	
Trading profit	318,691	[illegible]
Depreciation	19,157	[illegible]
Interest, etc.	46,926	[illegible]
Pre-tax profit	252,668	[illegible]
Taxation	105,577	[illegible]
Net profit	147,091	[illegible]
Dividends	54,008	[illegible]
Acquisition costs, etc.*	21,994	[illegible]
Balance	71,097	[illegible]
Forward	243,850	[illegible]

* Stretchova.

Cooper Inds.

Mr. Charles Cooper, chair[man] told the annual meeting of Co[oper] Industries that he was confi[dent] of results breaking even fur[ther] records next year.

The first quarter's managem[ent] figures showed turnover up 25 per cent. and a similar incr[ease] in profits, he said.

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Pending dividends timetable

For the convenience of readers, the dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements, except where the forthcoming Board meetings (indicated thus*) have been officially published. It should be emphasised that the dividends to be declared will not necessarily be at the amounts or rates per cent. shown in the column headed "Announcement last year." Preliminary profit figures usually accompany final dividend announcements.

	Date	Announcement last year		Date	Announcement last year
[illegible]			*Union Corpn. Group	Sept. 26	Dividends
National Finance	Sept. 25	Int. 16%	United Real Property	Oct. 26	Final 10%
[illegible]	Sept. 24	Int. 5½%	*Wadham Stringer	Sept. 26	Int. 8%
[illegible] Minsep	Sept. 25	Int. 5.9%	Wadkin	Sept. 30	Int. 4½%
[illegible] (Ldn. SW1)	Oct. 2	Int. 8%	Wheelock Marden	Sept. 8	Final 70 cents
[illegible]	Sept. 28	Int. 10%	Wilmot Breeden	Oct. 12	Int. 4½%
[illegible] National Disc.	Oct. 13	Int. 5%	*Winn Indus.	Sept. 26	Int. [illegible]
[illegible] Duffus	Oct. 30	Int. 15%			
[illegible] Siddeley	Oct. 29	Int. 7%			
Samuel	Oct. 28	Int. 6%			

* Board meetings intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made from reserves.

Local Authority investments

LOCAL AUTHORITY loan rates showed a firmer tendency last week, although in some sectors of the money market as a whole rates tended to fall slightly, with the three-month sterling certificate of deposit, for instance, ending at 13⅞ per cent., against the previous 13½-13⅜ per cent.

The three-month local authority deposit rate was unchanged at 13-13¼ per cent., but the seven days' notice rate eased on balance to 11⅞-12¼ per cent., from the previous 11½-12 per cent., and the one-year mortgage rate finished at 13¾-14 per cent., compared with 13⅝-13⅞ per cent. the previous Friday.

The Financial Times Government Securities Index rose 0.28 point on balance to 63.71, touching 63.77 on Tuesday. One-year local authority bonds were placed during the week at par, with a coupon of 13¾ per cent., to offer a yield ¼ per cent. below that on the previous week's bonds.

*Rate (%) September 21, 1973

[illegible]ays' notice (deposit receipt)	11¾ —12
[illegible]ays' notice (deposit receipt)	11¾ —12¼
[illegible]ays' notice after one month (deposit receipt)	12¾ —12¼
[illegible]ays' notice after three months (deposit receipt)	13 —13¼
[illegible]ays' notice after six months (deposit receipt)	13¼ —13¾
[illegible]gage at one month's mutual notice after 11 months	13¾ —14
[illegible]gage at one month's lender notice after 11 months (nominal term 2-5 years)	11¾ —13¼†
[illegible]ears' mortgage	13¾ —13¾†
[illegible]ears' mortgage	12¾ —13†
[illegible]ears' mortgage	12¾ —12¾†
[illegible]ears' mortgage	12 —12½†
[illegible] years' mortgage	12 —12¼†
[illegible] years' mortgage	11¾ —12¼†

* Rates are for sums not less than £20,000 and are subject to local [illegible]tions and fluctuations. † Nominal. ‡ Shorter period may attract [illegible]r rates than longer.

Councils borrow over £1,100m. in half-year

BY DONALD MACLEAN

BORROWING by local authorities in the April-June quarter totalled £845m., compared with £560m. in the previous quarter, and £253m. in the same quarter last year.

On a seasonally-adjusted basis, [illegible] were net borrowings of [illegible]m. in the second quarter, bringing the total for the half-year to £1,086m., against £786m. in the second half of 1972.

The reintroduction in the [budg]et of the scheme for public [bodi]es to borrow foreign currency with Treasury cover against exchange risk is reflected in [the] authorities having raised [£..]m. in the such currencies in the second quarter, and £30m. in the first quarter.

Temporary loans (for under a year) totalled £295m. in the second quarter against £198m. in the first quarter, and an average of £136m. a quarter in the second half of 1972. Longer-term borrowing amounted to £250m. in the second quarter, against £362m. in the preceding three months and an average for the second half of 1972 of £266m. a quarter.

Borrowing through negotiable bonds and quoted securities came to £115m. in the April-June period, against £54m. in January-March, but borrowing from the Public Works Loan Board fell to £120m., from £307m.

London tea sales

[illegible] tea sales held in London last [week] 30,221 packages sold realised an average price of 42.17p per kilo, against [..] at the previous sales and 38.31p [a ye]ar ago. Plain tea was quoted at 34p.

	No. of kilos	Average per kilo
Ceylon and Gen.	28,374	45½p
[illegible]	11,257	47p
[illegible]	12,433	46p
[illegible]	15,257	33½p
[illegible] African	40,677	41p
[illegible] Africa	27,713	37p
[illegible] Tea Plants	10,955	43p
Luleri	21,286	41p
Lunuva	26,385	42p
Makum	28,422	31p
Namdang	[illegible]	46p
New Dimbula	9,355	40p
Nuwara Eliya	6,655	39½p
Pabbojan	3,554	50p
Rajawella	12,326	40½p
Roo Estates	25,908	34p
Scot Tea and Lands	6,073	45p
Spring Valley	5,416	43½p
Standard	44,902	44½p
Tanganyika	25,206	43½p
Telbedde	21,384	47½p

Stock at September 14 amounted to [illegible].

RECENT ISSUES

EQUITIES

[illegible]

FIXED INTEREST STOCKS

[illegible]

BIDS AND DEALS

Cowan de Groot acquires N. Rose (Electrical)

Mr. Ernest de Groot, chairman, disclosed at the annual meeting of Cowan de Groot that Norman Rose (Electrical) had been acquired for £268,000—£200,000 cash and 68,000 "A" Ordinary shares of 10p.

Rose, whose directors have undertaken to sign long-term service agreements, operates in the wholesale electrical and electronics field selling in the main to radio and TV dealers. Its head office is in London, with branches in Manchester, Birmingham and Bradford.

Mr. de Groot commented that Rose would complement and strengthen the group's existing electrical wholesale division.

Atlantic Intnl. Bank changes

Atlantic International Bank announces that five of its original eight partners are acquiring the holdings of the other three—First Pennsylvania Banking and Trust Company, United California Bank and Banque de Neuflize, Schlumberger, Mallet.

Subject to the agreement of the Regulatory Authorities, Manufacturers National Bank of Detroit and The National Shawmut Bank of Boston will in future each hold 25 per cent. of the capital and Banco di Napoli, Charterhouse Japhet and F. van Lanschot Bankiers will each hold 16⅔ per cent.

Mr. S. Clarke, chairman of Charterhouse Japhet has been elected chairman. Mr. P. Davis III, vice-chairman of The First Pennsylvania having completed his year of office as chairman, has retired by rotation.

First Pennsylvania and United California have been operating in London through their branch offices since 1968 and have decided to concentrate their London banking activities on their respective branches, while Banque de Neuflize considered this an appropriate time to sell its interest as part of the restructuring of its investments.

ST. PIRAN-ARV

Shareholders of St. Piran Mining will be asked at a special meeting on October 5 to approve the purchase of 45 per cent. of ARV Holdings, to approve an offer for the outstanding shares, and increase group borrowing powers from £2.9m. to £10m.

Chairman Mr. J. J. Raper says in a letter to holders it is the intention to diversify from mining in Britain and overseas into U.K. and office building. St. Piran will retain its tin mining interests in Malaysia.

Although there is an obligation to bid for the remaining 55 per cent. of ARV, St. Piran intends to try and keep ARV's share listing.

Rowton buys hostel in Birmingham

Rowton Hotels has exchanged contracts with Gitgate Holdings for the acquisition of the freehold, fixtures, furniture and fittings of the Highgate Hotel, Birmingham, having a book value of about £197,000.

The acquisition will be satisfied by the issue of 110,000 new Ordinary in Rowton worth 155p each and a total of £170,000. They will not rank for the interim dividend declared for the year 1973.

Highgate Hotel, a men's hostel, has the capacity to sleep about 750 in separate rooms—currently there are some 250 unlet. Profits, before tax, for the year ended June 30, 1973, excluding overdraft financing were £16,868.

Rowton expects, following an improvement in occupancy trends in the last few months, the hotel will contribute, before tax, some £19,500 to group profits in its first year trading under its management.

UNILEVER—FORD AND SLATER

Lazard Brothers announces acceptances of the offer made on behalf of Unilever for the capital of Ford and Slater Holdings not already owned have been received from 92.26 per cent. of holders in respect of 4,109,850 Ordinary shares—96.85 per cent. of those subject to the offer and 77.96 per cent. of the issued capital. The offer has become unconditional and remains open.

Unilever held 1,027,920 shares (19.5 per cent.) before the offer and now holds 5,137,770 (97.46 per cent.).

SHARE STAKES

Reed International has purchased 30,887 Ordinary shares in Scott's Restaurant (12.35 per cent.).

British Electric Traction's holding in Ordinary shares of Rediffusion has been increased from 56.61 per cent. to 57.36 per cent. by the recent purchases of 615,000 shares.

Jessel Securities has acquired 623,250 Ordinary shares (11.5 per cent.) in Ransomes Sims and Jefferies, and there are associated holdings amounting to 121,200 shares representing a further 2.2 per cent.

Its interest in Charles Roberts on August 21 amounted to 160,131 Ordinary shares (19.1 per cent.).

Cluff and Co. has acquired 255,300 shares of Gadek Rubber—11.6 per cent. of the voting shares.

Norwest Holst has received notification that 2,624,500 shares of the company are held by the consortium consisting of Mr. R. Slater, Mr. J. Lilley, Mr. L. Hall, First National Equities (subsidiary of First National Finance Corporation), and Direct Spanish Telegraph.

Slater Walker Securities interest in Solicitors Law Stationery at September 3, 1973 was 4,021,550 Ordinary (40.22 per cent.). Its stake in Slater Walker Far Eastern Investment Trust at September 13 was 3,865,767 Ordinary (64.42 per cent.).

Acquisition by Business Computers

Business Computers has acquired a precision tooling company, Colham Engineering, which will manufacture tools for Business Computers' subsidiary in the magnetic tape head business, Marriott Magnetics, and also continue to undertake some contract work for customers.

Consideration was £103,000—£53,000 cash plus 30,000 Ordinary shares of 10p. Net assets acquired on September 10 amounted to £98,000 including the freehold factory premises at current valuation. Profits before tax of Colham for its last year were £21,000.

HIGHLAND ELECTRONICS

Highland Electronics Group announces that its subsidiary Highland Electronics, has acquired a factory at Hillend Industrial Estate, Dunfermline, Fife, from Fife County Council. The factory comprises 33,000 square feet standing in 4.3 acres and is adjacent to its present factory, which is rented and will now be relinquished.

The cost of the land and building is £143,440, of which £94,380 is being raised by a mortgage from Fife County Council and £46,200 is by way of a grant from the DTI. The cash outlay by the company is £2,860.

The move is being made to allow for expansion of production.

EASTERN PRODUCE

Eastern Produce Holdings intends to continue the policy of strengthening its commodity and trading interests in the U.K. and overseas, the new chairman, Mr. Oliver Jessel, says in a letter to shareholders.

An extra-ordinary meeting will be held on October 8 to approve a share exchange agreement to sell 200,000 Ordinary shares of Bandanga Holdings to London and County Securities, and to ratify the sale of Robert Hudson (Raletrux) to a subsidiary of Jessel.

MARAWAN (JAVA)

Marawan (Java) Rubber Plantations announces that at the adjourned AGM shareholders approved the sale for not less than £150,000 of the issued capital of N. V. Tjorah Mas Kepoetren Estates. A further anouncement will be made on completion.

JONAS WOODHEAD

Jonas Woodhead and Sons has purchased Douglas Campbell, of Gowanbrae, Caldercraix, Airdrie.

As consideration Woodhead has issued 50,000 Ordinary shares and paid £1,000 in cash.

Campbell manufactures and repairs all types of laminated road springs.

FINANCIAL TIMES STOCK INDICES

	Sept. 21	Sept. 20	Sept. 19	Sept. 18	Sept. 17	Sept. 14	A year ago
Government Secs.	65.71	65.74	65.75	65.77	65.58	65.45	71.57
Fixed Interest	64.08	64.02	64.02	64.00	65.09	65.75	72.96
Industrial Ordinary *	422.2	419.2	420.5	425.9	427.6	420.7	475.1
Gold Mines	163.2	160.5	156.6	157.9	154.5	150.5	95.1
Ord. Div. Yield	4.50	4.50	4.46	4.45	4.44	4.51	3.43
Earnings Yld.% (full)	10.01	10.09	10.06	9.92	9.97	10.1	5.27
P/E Ratio (net)	14.61	14.51	13.45	15.56	15.56	15.46	18.97
Dealings marked	5,506	5,085	6,510	7,568	[illegible]	[illegible]	7,946

[illegible]

HIGH AND LOWS | S.E. ACTIVITY

[illegible]

FT—ACTUARIES INDICES

[illegible]

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"RIGHTS" OFFERS

[illegible]

BANK BASE RATES

Allied Irish Banks Ltd.	11 %
Anglo-Eastern Bank	11½%
Anglo-Portuguese Bank	11 %
Audley Holdings Ltd.	11 %
Banco de Bilbao	11 %
Bank of Cyprus	‡11½%
■ Wm. Brandt's	11 %
Brit. Bk. of Commerce	12 %
Brit. Bank of Mid. East	11 %
■ Brown Shipley	11½%
Cedar Holdings	11 %
■ Charterhouse Japhet	11 %
Choulartons	11 %
C. E. Coates	11½%
Consolidated Credits	11 %
Co-operative Bank	*11 %
Corinthian Securities	11 %
Credit Lyonnais	11 %
G. R. Dawes	11 %
Dawnay Day	11½%
Duboff Brothers	11 %
Dunbar & Co. Ltd.	11½%
Duncan Lawrie	11 %
English Transcont.	11 %
First Maryland	12 %
FNFC	11½%
■ Antony Gibbs	11½%
Gresham Trust	11½%
Greyhound Guaranty	11 %
■ Guinness Mahon	11 %
■ Hambros Bank	11 %
Hawtin & Partners	11 %
■ Hill Samuel	§11 %
C. Hoare & Co.	†11 %
Julian S. Hodge	11½%
Italian International	11½%
Jacobs Kroll	11½%
Keyser Ullmann	11 %
Kingshurst Securities	11½%
London & County Sec	11½%
London Mercantile	11½%
■ Samuel Montagu	11 %
Moorgate Mercantile	11 %
■ Morgan Grenfell	11 %
Morris Wigram Ltd.	11½%
Northern Comm. Tst.	12 %
Portman Guaranty	12 %
■ Rea Brothers	11½%
P. S. Refson & Co.	11 %
■ N. M. Rothschild	11 %
St. Mary Axe Finance	11½%
E. S. Schwab	11 %
Security Tst. Co. Bhm.	11½%
Standard Guarantee	11½%
Sterling Credit	11½%
Sterling Industrial Sec.	11½%
Swiss-Israel Trade Bk.	11 %
Twentieth Century Bk.	11 %
Wallace Bros Sassoon	11½%
Whiteaway Laidlaw	11 %
G. T. Whyte	11 %
Wintrust	12 %

[illegible]

MINING NOTEBOOK

St. Helena gets a 'new mine' look

BY LODESTAR

THE SEARCH for new gold mines and the revival of old ones are a natural concomitant of the withdrawal of the cork from the gold price bottle which has resulted in a tripling of the metal's value.

From a mining viewpoint this explosion is not all that brilliant because of the escalating cost factor as paper currencies depreciate in terms of gold. But it still has enough sparkle to keep the yellow metal high on the list of the world's prospecting fraternity apart possibly from the Australian segment where the miners have been given a sudden tax swipe which overnight altered their whole economic outlook and will inevitably have dampened if not entirely eliminated their enthusiasm.

Jurgens Hof

In South Africa, however, enthusiasm still runs high. In the Far Western Rand Deelkraal is on the boil, the only real question being whether Gold Fields or Anglo American will be in command. Johannesburg Consolidated's new Randfontein mine is already on the way to production with trial milling now in progress.

But it is in the Orange Free State that most plans are afoot. And one of them the Jurgens Hof prospect, a joint venture by Union Corporation and Selection Trust, has got the go-ahead. What is more the week-end announcement has settled another inter-mining house question which has been intriguing the pundits. Namely that, although the ground lies some two miles south-east of the St Helena mine, it is to be worked by that company and not by its more immediate Anglo American group neighbours Presidents Steyn and Brand.

Capital cost

It is understood, however, that President Brand's No. 4 shaft will be used as the statutory second outlet so that only one shaft will be initially needed on Jurgens Hof thus helping to cut the estimated capital cost of establishing a new mine to a relatively modest R40m. (£24.6m.). Another important factor, of course, is that St. Helena will be providing the treatment facilities on a royalty basis. It is assumed that the ore after milling will be pumped to that company's works. There should at least be no gradient problems.

The life of Jurgens Hof with a start-up date of early-1979 is put at a relatively modest 12 years, on a 72,000 tons of ore a month basis. This is leading to Johannesburg conclusions that only part of the story may now have been told. Other intriguing prospects lie ahead in view of the further areas of possibly payable ground lying to the south of St. Helena and the two Presidents.

Unisel flotation

So Johannesburg, never at a loss for flying high in its speculation about the future, is already prepared to envisage an eventual merger between St. Helena and President Brand in order to iron out what is regarded as a complex situation.

To return to the Jurgens Hof prospect itself, the deal seems to be a nice one for that old favourite of this column St Helena depending, of course, on the royalty rate. At least it has been agreed that the exploitation of the new mine will carry no risk of financial loss for the company nor will it have to provide any funds derived from its existing mine that would otherwise have been available for its own dividends.

Ore grade query

Capital for the new project will come from Unisel Holdings which is to be converted in due course into a public company, the shares of which will be listed. Unisel is currently held jointly by Union Corporation and Selection Trust but Free State Development ("Freddies") has the right to subscribe for 7½ per cent of the equity capital, although other parties are entitled to half this, and the Jessel offshoot Duiker Exploration also has 7½ per cent. The last-named raised fresh capital by a rights issue earlier this year to pursue its mining interests including the possible development of Jurgens Hof.

On Friday Duiker shares went up 20p to 100p. "Freddies" were 10p better at 140p and St. Helena were ¼ higher at £10¼, still well below their year's peak. At this stage in the proceedings they seem to be the most solid way to take an interest in this intriguing new venture in which there are two major unknowns. The first is the lease terms, still to be settled.

The other is the vital one as to what the gold grade of Jurgens Hof is. No borehole results have been published. Presumably they will have to be when Unisel goes public. In the meantime, the only guide is the mining houses' claim that the Basal roof will be "very profitable."

The latest excitement in golds coincides with a timely 29-page review of the South African segment from Vickers, da Costa who, with a natural last-minute proviso prompted by the Western Deep shootings, come down on the side of the bulls in this market and select Western Deep itself along with Elsburg, Harmony, East Driefontein, President Steyn and Vaal Reefs and for a spread of risk Gold Fields of South Africa.

"Tanks" look good

Things were looking up for Tanganyika Concession, stock units last week. They rose 17p to 220p. First there came a boost from the half-year results of the 90 per cent. owned Benguela Railway which reported a net revenue of Esc233.9m., up from Esc172.1m. for the same period of 1972.

Then on Friday, Union Miniere, in which "Tanks" has a 17.6 per cent. stake, forecast increased 1973 earnings aided by higher metal prices, interest rates and investment income which should more than offset the negative effects of the fall in value of the company's dollar holdings and lower prices of shares held in North American companies.

Underground exploration of Union Miniere's promising Thierry copper prospect in Canada, in which "Tanks" also has a direct interest, is expected to be completed next year. A final decision to mine the deposit can then be made.

"Tanks" profits for the year to July 31 last were well ahead at half-time and should be sufficiently up for the 1970-71 dividend rate of 12½p to be re-instated. The results are due early next month. The shares could rise further in anticipation of good figures.

INSURANCE

Monopoly Commission report

BY OUR INSURANCE CORRESPONDENT

RATHER MORE than a year has passed since the publication of the Monopolies Commission Report on the Supply of Fire Insurance—which it will be recalled (with a majority of 7 to 1 among its members) declared that there was "no alternative" to the abolition of the fire tariff.

The Commission set no time limit to the implementation of its recommendation. But since the public comment and private discussion last autumn, outwardly nothing has yet happened to disturb the Fire Offices Committee in the conduct of its affairs. Which, after all, is not surprising.

On the one hand, the FOC member companies could scarcely have been expected voluntarily to discuss among themselves or with the Government either the substantial alteration of FOC practices or their complete abolition, when their public and private stance after the publication of the report was that the Commission had got it all wrong.

Hands full

For its own part, the Government, and more particularly the DTI, has had its hands full in the past year dealing with the passage of this year's Insurance Companies Amendment Act in the light of the V and G and Scott Reports, with the negotiations over the adjustments in market practice consequent on EEC membership, and so on.

Relieved of these preoccupations, it seems that the DTI has now got the Commission's Report off the shelf and asked the FOC what its intentions are, and it seems that the FOC is just as surprised this year to find that the Government expects implementation of the Commission's Report as it was last year to find that the Commission's report had not endorsed its practices.

But why? Even among the most optimistic members of the FOC it could scarcely have been expected that the DTI would merely leave the report on the shelf eventually to be forgotten —particularly as the present Prime Minister when he was at the Board of Trade in the early '60s attacked restrictive practices and set in train our present anti-monopolistic legislation.

Unconvinced

When the Commission was sitting, the FOC failed to convince it that the continuation of the commercial fire tariff was essential to the wellbeing of the British public and the British insurance market in both its home and overseas operations. If, as was said by the fire offices last year, that the Commission had got it all wrong, then the question must be asked, did the fire offices, while convinced of the justice of their own case, fail to bring the best evidence or adduce the best arguments?

These are not just academic questions. At this stage the DTI is seemingly intent on requiring some action on the Commission's Report in the near future. Any discussion between the FOC and the DTI must to some extent partake of the nature of an appeal from the Commission's Report. If the DTI is to be persuaded to turn its back on the Report, then it can do so only for one of the two following reasons—if the FOC can produce evidence that was not put to the Commission which in the opinion of the DTI would inevitably have altered the Commission's conclusions had the Commission been aware of that evidence, or if the FOC can show that the conclusions of the Commission were against the weight of the evidence, perhaps inspired by subjective attitudes rather than objective logic.

Does not pay

The Chairman of the F.O.C. in one of his infrequent public utterances said that members fear that "without the discipline of the fire tariff, companies would not know where they were. Competition could force rates down for a short time and then sharply up again afterwards."

In other words the fear is that the fire market would behave in the same way as did the motor market in 1969 and 1970 after the motor tariff had been disbanded. But can this really be so? Most of the leading offices in the F.O.C. ranks also have substantial motor accounts and many other members also write motor insurance: all must have learnt from bitter experience that rate cutting does not pay.

Moreover the monthly B.I.A. figures show that fire losses this year continue to climb at an alarming rate. At the end of July, this year's seven months total of £101.6m. is 71 per cent. up on the comparable period in 1972. Without doubt some insurers are being hit more than others but in the current year, market wide, there will be little profit in the home fire account. So among the British fire insurers whether members of the tariff or not, rate cutting competition seems unlikely at the present time.

Tanker charter rates still high

BY JAMES McDONALD, SHIPPING CORRESPONDENT

WITH DEMAND for tankers still strong, and available tonnage in short supply, tanker charter rates last week remained at very high levels and show few signs of dropping.

Period charter demand for ships, centred on deliveries before the end of 1973, is increasing.

Against a background of little remaining September tonnage in the Persian Gulf—and only about 3m. tons of known tonnage available for loading in October—there was not a great deal of Persian Gulf business last week.

The result was a further rise in rates, with up to Worldscale 365 paid for Persian Gulf to west tonnage and even higher levels for special requirements such as a 30,000-tonner from Persian Gulf to River Plate at Worldscale 450 and "handy-size" consecutive voyages from Persian Gulf to India at Worldscale 450.

For Caribbeans to U.S.A. voyages, rates have shot up in less than a week by over 100 points, the latest fixtures are at between Worldscale 410 and 415.

In the period-charter market there was a further increase in demand from American charterers—particularly for ships of up to 80,000 tons—and a considerable rise in rates was conceded by charters. Commonwealth and Sun Oil joined charterers seeking medium-size ships, and Shell Houston fixed a 70,000-tonner for two consecutive voyages from early October at Worldscale 330, followed by three years' time charter at about Worldscale 163.

In the VLCC—supertanker—range, Agip is seeking 200,000-250,000 tonners for three years' timecharter with delivery up to spring next year, while French charterers have fixed a 220,000-tonner for two years' consecutive voyages from December, at Worldscale 145.

"Ridiculous but credible."

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REGIONAL MARKETS

[illegible]

INTERNATIONAL COMPANY NEWS + EURO MARKETS

EUROBONDS

No clear trends

BY MARY CAMPBELL

UNCERTAINTY as to future trends continues to be the main feature of the Eurobond market. Whereas the previous week the announcement of three dollar-denominated issues transferred attention to the dollar sector, the non-dollar sectors were the main centres of activity last week.

On the dollar sector, though, the Hongkong Land "with warrants" issue was closed successfully, the $50m. convertible issue for Walt Disney was postponed. Elsewhere, however, a number of new issues were announced, while the Eurco 30m. issue for the European Investment Bank closed very successfully with a reduction in the coupon from 8¼ to 8⅛ per cent. Though the issue was priced at 99½, in contrast to the full 100 per cent. which had been expected following the initial favourable response, the cost to the borrower will still be below 8¼ per cent. over the full life.

On the DM international bond market, two new issues have been announced. The first, for Eurofima, is for DM50m., coupon 8 per cent. and indicated offering price 99½. The second is DM100m. for the Canadian company Brascan. The indicated coupon on this is 8½ per cent. and the indicated offering price 98½. Brascan is not a very well known name to European investors—it has borrowed only once before, on the dollar market—while because of its large investments in South America, it is not given the top rating which would be expected for most Canadian names. Eurofima by contrast is based in Basle and is expected to prove attractive to investors trying to get their money into Swiss names.

Two more new issues have also been announced on the Swiss franc market—Sw.Frs.100m. for the European Investment Bank and Sw.Frs.50m. for the South African Posts and Telegraphs Department. In contrast to the recent issue for Dow Chemical, which carried a coupon of 6¾ and was priced at par, the coupon level on the EIB issue has been fixed at 6½ per cent.—though it was priced at 100½.

● The second stage of the Eurex project for setting up a computerised trading system for Eurobonds got off the ground formally last Friday, when the study syndicate for the second and final feasibility study held its first meeting. The funds for the second feasibility study have been put up by 70 banks interested in the project, while Fiduciaire Générale de Luxembourg (the consultants who did the backroom work for Cedel) have been commissioned to carry out the feasibility study.

Credit-op loan will aid Venice restoration

By Anthony Robinson

ROME, Sept. 23.

DESPITE EARLIER denials the Italian credit institute Creditopere has stated that the $500m. loan now being negotiated with a consortium led by Lehman Brothers will be used, at least partially, to finance the restoration of Venice. This agreement is due to be signed in London this week.

Creditopere said that negotiations with Lehman had been going on for a year or so, originally on the basis of a long term 15 to 20 year bond issue. But due to slowness at the Italian end in preparing the planning and other work to be financed at Venice Creditopere decided to go ahead with the loan on a relatively short six-year basis instead.

The funds will now be partly used to finance the requirements of Creditopere's overall financial commitments to Italian public and local authorities and then to satisfy the Italian Treasury's growing capital requirements for Venice once work actually gets under way.

This means that once the Venice restoration scheme actually comes into operation Creditopere expects to return to the international market for long-term finance as originally conceived. This will also entail refunding on a long term basis that part of the present loan which has not been already committed at that time.

Champagne groups link

THE SOCIETE Piper-Heidsieck and Société Canard-Duchene, champagne producers, have announced an agreement to establish close links while maintaining their own identities.

Piper will acquire a 34 per cent. interest in Canard, and Canard will become a shareholder of Piper. Terms and further details were not disclosed.

With about 6m. botles sold annually, the new group will be France's third largest champagne producer.

Piper had net profit of Frs.4.4m. last year on sales of Frs.65.3m. It delivered more than 3.7m. bottles of which 2.2m. were exported, mainly to the U.S. and Italy.

Canard had net earnings of Frs.2.2m. on sales of Frs.34.7m.

Phillips sees 50% rise in earnings

EARNINGS OF Philips Gloeilamp-Fabriken, of the Netherlands, will be "close to 50 per cent. higher this year than in 1972," F. J. Philips has revealed to a business gathering in San Francisco.

In the first six months of 1973, Philips earned $145m. after tax, some 46 per cent. more than in the same period of 1972. He indicated that the year-to-year earnings gain was holding.

Philips expressed uncertainty about whether strong profit gains could again be made in 1974.

He sharply criticised his Government's move revaluing the guilder 5 per cent. upward. It would make Philips' export sales harder to come by he said, and intensify competition from imports.

Beyond that, Philips said the revaluation, which the Dutch Government hopes will curb inflation is unlikely to "do anything of the sort."

AP-DJ

Creusot Loire deal with Worthington

Creusot Loire has signed an agreement in principle with the Worthington International Group to set up a joint pump manufacturing subsidiary.

The companies still have to obtain French Government approval and other details remain to be settled, but it is hoped that the new company, Worthington-Batignolle, will be operational before the end of the year, it added.

It will use Creusot's factory at Nantes and Worthington's know-how and sales network, Creusot Loire said. Reuter

AUSTRALIAN WEEKLY LIST

Australian $	Sept. 21	Sept. 14	Australian $	Sept. 21	Sept. 14
Advertiser Newsp'p't	†2.15	2.23	Kiwi Ins.	0.94	0.97
Ansett Transport	†0.69	0.72	M.L.C.	‡4.20	‡4.30
Assd. Securities	1.49	1.49	Mauri Bros. & T.	†1.35	1.24
Aust. Guarantee	1.73	1.61	Mayne Nickless	1.27	1.26
Aust. & Kandos Cem't.	1.53	1.56	Nylex Corporation	1.01	1.17
Aust. Paper M'nf'r'g.	†1.74	1.75	Olympic Cons.	0.85	0.89
Boral	2.12	2.17	Overseas Corporation	1.34	1.65
Bramble Inds.	1.11	1.08	Petersville	†0.31	0.31
Burns Philip	3.82	4.02	Queensland Cement	‡2.80	2.74
Carpenter (W.R.)	2.12½	2.28	Queensland Ins.	3.85	†3.97
Castlemaine Perkins	6.34	5.95	Rocla Industries	2.97	1.82
Coal & Allied	1.09	1.09	Swan Brewery	2.01	2.09
Commercial Bank	2.10	2.04	TV Corporation	2.50	Nil
Commercial Union	1.16	1.17	Thiess	1.37	‡1.48
Commonw'lth Mining	2.30	2.50	Thomas Nat. Trans.	1.64	1.82
Grace Bros.	2.05	2.07	Tooheys	†2.10	2.22
Hardie Asbestos	5.65	5.60	Travelodge	0.68	†0.65
Herald & Weekly	3.32	3.35	Woodside Burmah	1.42	1.44
Humes	1.12	1.22			

† Buyer. ‡ Seller.

TEL AVIV STOCK EXCHANGE

Company	Prices Sept. 23 1973	Change on the week	Company	Prices Sept. 23 1973	Change on the week
Land Development					
Africa Israel Invest IL 10	277	−6			
Israel Land Develop. Br.	190	−3.5			
Menadrin	186.5	−16			
Pri Or	187	−7			
Public Utility					
Israel Electric Corp.	56	−1			

Source: Bank Leumi Le Israel, Tel Aviv.

JOHANNESBURG

MINES

INDUSTRIALS

AUSTRALIA

	Sept. 21	
Pioneer Concrete	1.77	+0.02
Tom Piper (50 cents)	†2.28	
Reckitt & Colman	‡2.85	−0.01
Repco	1.14	
St. James Properties	0.89	
Slater Walker	0.59	−0.01
H. C. Sleigh	0.58	+0.01
Southland Mining	†3.42	−0.04
Stocks & Holdings	‡4.0	
Tooth (S1)	†5.04	
Unichrome	†0.52	
Waltons	1.87	+0.01
Western Mining (50 cents)	†1.48	−0.07
Woolworths	1.06	

CANADIAN WEEKLY LIST

SINGAPORE PRICES

Indices

NEW YORK

DOW JONES AVERAGES

IND. DIVIDEND YIELD p.c.

N.Y. SE ALL COMMON INDEX

RISES AND FALLS

AMERICAN SE MARKET VALUE INDEX

STANDARD AND POORS U.S. STOCK INDICES

		*Ind. Ord.	§Composite
Sept.	21	120.28	107.20
..	20	119.85	106.76
..	19	118.91	105.38
..	18	116.42	103.77
..	17	116.85	104.13
..	14	117.26	104.44
..	13	115.94	102.26
1973 High		134.01 (5/1)	120.17 (5/1)
1973 Low		112.97 (22/8)	100.54 (22/8)

*425 Industrials. §425 Industrials, 50 Utilities, 25 Rail.

STOCK AND BOND YIELDS

	Sept. 18	Sept. 5	Sept. 19 1972
Ind. Ord. yield pc	2.88	2.92	2.60
Ind. Ord. p/e ratio	14.28	14.93	17.93
Long-term Govt. Bds. pc	6.99	6.23	5.61

FRIDAY'S ACTIVE STOCKS

	Stocks traded	Closing price	Change on day
Fed. Nat. Mort.	737,900	21¼	−⅝
RCA	361,000	25⅞	−⅜
Fleetwood Enterp.	330,800	10⅞	−⅛
Inter. Tel. Tel.	210,900	36	+⅛
Boise Cascade	202,700	15¾	+⅛
Allied Chemical	187,500	35	−1⅛
Bethlehem Steel	175,500	30⅜	−⅛
General Motors	162,300	64½	−⅛
TRW	172,500	28	−⅝
Texaco	150,700	30¾	+⅛

TORONTO

INDUSTRIAL INDEX

Sept. 21	Sept. 20	1973 High	1973 Low
219.40	218.20	252.86 (12/1)	202.43 (22/8)

MONTREAL

INDUSTRIAL INDEX

Sept. 21	Sept. 20	1973 High	1973 Low
248.56	248.23	258.72 (12/1)	206.85 (22/8)

COMBINED INDEX

JOHANNESBURG

MELBOURNE YIELDS

Av'ge yield on 50 Leading Stocks	Sept. 20	Sept. 13	Sept. 6
On Dividends	5.28	5.22	4.90
On Earnings	8.82	8.87	8.16

SYDNEY ALL ORD. INDEX

Sept. 21	Sept. 20		Low 1973
473.37	474.55		469.46

HONG KONG INDEX*

Sept. 21	Sept. 20	High 1973	Low 1973
523.24	508.32	1,774.96 (9/3)	494.50

SINGAPORE INDEX §

Sept. 21	Sept. 20	High 1973	Low 1973
520.10	518.17	611.60	269.71 (4/1)

TOKYO NEW SE INDEX†

Base=100 January 4, 1968.

Sept. 22	Sept. 21	Div. %	Yield %
342.77	339.88	11.90	2.13

		High	Low
1973		422.43 (24/1)	329.88 (21/8)

EUROPE

	Sept. 21	Previous	1973 High	1973 Low
Belg'm (a)	138.20	128.86	142.38 (22/8)	124.11 (8/1)
Denm'rk (d)	124.84	124.86	128.96 (10/3)	132.98 (6/7)
France (b)	—	94.2	98.9 (4/6)	79.3 (5/1)
Germany**	91.07	91.80	120.71 (16/5)	89.90 (27/7)
Holland (e)	140.5	141.7	171.8 (15/4)	140.5 (21/9)
Italy†	117.43	117.59	147.38 (19/6)	95.35 (16/2)
Sweden (e)	349.06	354.55	369.84 (10/1)	349.06 (21/9)
Switz'l'd	350.5	351.1	430.1	336.8

OVERSEAS SHARE INFORMATION

NEW YORK

Investment $ premium based on $2.60 per £1—32¼% (32⅜%). Conversion factor 0.8143 (0.8223).

CANADA

GERMANY ◆

PARIS

MILAN

Sept. 21	Price Lire	+ or −	Div. Lire	Yld. %
Alitalia Priv.	7,710	+90	—	—
ANIC	1,105	+17	—	—
Bastogi	1,806	−30	60	3.3
Breda	4,395		100	2.2
Burgo	11,350	−50	—	—
Centrale	15,400	−310	300	1.9
CIGA	7,110	−190	130	1.6
Cucirini	7,700	−199	500	3.9
Dalmine	368	−15	—	—

AMSTERDAM

SWITZERLAND ●

TOKYO ¶

Source Nikko Securities, Tokyo.

STOCKHOLM

BRUSSELS

COPENHAGEN

OSLO ◆

SPAIN ▼

VIENNA

AUTHORISED UNIT TRUSTS (p***)

§ Yield %

(g) Abacus Arbuthnot Ltd.

Discretionary Unit Fd. Managers

(a) (g) Jessel Britannia Group

(a) (g) National Group

Scottish Securities Limited

(a) (g) Allied Hambro Group

(a) (g) Ebor Securities Ltd.

(a) (g) Equitas Securities Ltd.

(a) (b) (c) Equity & Law Un. Tr. M.

Family Fund Managers Ltd.

First National Equities Limited

Framlington Unit Mngt. Ltd.

Friars House Unit Trust

Friends' Provdt. Unit Tr. Mgrs. Ltd.

G.T. Unit Managers Limited

(a) (g) G and A Un. Tst. Mgrs. Ltd.

Garrard Management Co. Ltd.

Govett (John)

Great Winchester Unit Trust

Guardian Royal Ex. Unit Mgrs. Ltd.

Henderson Administration

(a) Hill Samuel Unit Tst. Mgrs.

* Units sub-divided July 1973.

(a) (g) Intel
15, Christopher Street, E.C.2.
Intel Inv. Fund. 76.0 80.0 +0.5 3.58

Ionian Unit Trust Mngmt. Ltd.
64, Coleman Street, E.C.2.

Ionian Fgen Fd**	97.5	105.8	......	3.00
IonianGr'thFd.	165.0	172.8	......	3.27
IonianHiIne. Fd.	105.0	109.8	......	7.07

*Next deal. Oct. 4. † Next deal. Sept. 27. **Next dealing Oct. 11.

(a) (c) Jascot Securities Ltd.
31, Young St., Edinburgh 2.

Jasc'tCmp'dFd	31.4	35.4	+0.2	6.40
Do. (Accum)	33.5	35.5	+0.3	6.40
8% W'thdl'lUts	32.1	34.1	+0.5	—
Jascot Cap Fund	21.5	23.6	......	nil
J'tAustCom Fd	24.0	25.0	......	3.96
8% W'bdr'l Uts	24.0	25.0	......	—
Jas. Sent. Ltd	25.6	27.5	......	3.00
Jasc'tFin&Pd	19.4	21.4	......	2.34
Jas'tInG'th Fd	32.4	34.4	......	1.28
JascotNorthsea	23.5	24.5	......	1.89
Jascot Countr	34.4	37.4	......	7.50
Do. (Accum)	38.9	41.9	......	7.50
10% With'dl Cts	37.1	40.1	......	—

Deal. ‡Mon. *Tues. ††Wed. §Thur. **Fri.

(a) (g) Key Fund Managers Ltd.

Kleinwort Benson Unit Managers

L & C Unit Trust Management Ltd.

L.S. Fund Managers Limited

Legal & General Tyndall Fund

(a) Lloyds Bank Unit Tst. Mgrs.

Lloyd's Life Unit Tst. Mngrs. Ltd.

(a) (g) London Wall

(a) Mallet & Wedderburn Ltd.

Metrop. Exempt. Fund Mgrs. Ltd.

Minster Fund Managers Ltd.

Morgan Grenfell Funds

(a) (g) M. & G. Group

M&G Recovery	130.4	135.8	......	3.54
M&G Japan	100.3	106.5	—0.5	4.41
M & G European	53.0	55.9	—0.2	5.14
M & G American	34.2	36.1	+0.5	0.66
M & G Aust'asia	43.1	45.5	+0.1	2.45
M&G Far East'n	48.5	50.4	......	2.00
TrusteeFund	121.7	126.8	+0.5	4.11
(Accum. Units)	178.5	185.4	+0.8	4.11
Chari Fd. Sept18	128.2	130.9	......	5.08
Pension Sept. 17	110.0	112.8	......	4.19
Superir'stSep 20	116.1	119.8	......	4.35

M. & G. (Scotland) Ltd.
63, St. George's Pl., Glasgow.

ClydeConvGr'th	51.7	53.8	+0.5	1.76
ClydeConv. Inc.	47.1	49.0	......	6.73
Clyde General	61.8	64.3	+0.2	4.38
(Accum Units)	70.3	73.1	+0.2	4.38
Clyde High Inc.	65.4	68.0	......	6.75
(Accum Units)	77.4	80.5	—0.1	6.73

(a) (g) Mutual Unit Tst. Managers
4, Tokenhouse Bldgs., E.C.2.

Mutual Sec Plus	41.1	43.6	......	4.48
Mutual Inc. Tst.	55.4	58.7	+0.1	4.98
MutualBlueChip	37.5	39.6	......	4.20
Mutual HighYld	47.2	49.8	+0.2	6.23

National Provident Inv. Mgrs. Ltd.

(a) National Westminster

(a) (g) NEL Trust Managers Ltd.

New Court Fund Managers Limited

(a) (z) Oceanic Managers

(a) (g) Surinvest Fund Mgrs. Ltd.

(a) (g) Pearl-Montagu Tr. Mgrs. Ltd.

(g) (z) Pelican Units Admin. Ltd.

(a) (g) Piccadilly Unit T. Mgrs. Ltd.

Portfolio Fund Managers Ltd.

(g) (c) Practical Invest. Co. Ltd.

Provincial Life Inv. Co. Ltd.

(a) (b) (c) Prudl. Unit Tst. Mgrs.

Reliance Unit Mgrs. Ltd.

(a) Ritchld. & Lwnds. Mgrs. Ltd.

Rowe & Pitman Management Ltd.

(a) (g) Save and Prosper Group

J. Henry Schroder Wagg & Co. Ltd.
120, Cheapside, E.C.2.

Capital Sept. 11	98.4	100.9	......	2.49
Accum Units	105.0	107.6	......	2.49
Income Sept. 11	119.6	122.6	......	5.50
(Accum Units)	136.7	140.2	......	5.50
General Sept. 19	61.4	63.2	......	3.39
(Accum Units)	65.7	67.7	......	3.39
Europe Sept. 11	43.1	45.3	......	1.24
(Accum Units)	43.9	46.2	......	1.24
*P'n'nChty Aug21	135.1	137.8	......	5.30
*SpecialExSept11	172.8	176.1	......	2.98
*Recovery Sept.11	176.2	179.7	......	5.80

* For tax exempt funds only.

(g) Sebag Unit Trust Mngrs. Ltd.
PO Box 511, Bucklbury Hse, EC4

SebagCapitalFd.	24.1	25.0	......	2.70
SebagIncome Fd	23.9	24.8	......	5.20

Not available to public generally.

(a) Security Selection Ltd.
29, Mincing Lane, EC3R 7EE.

Univ Growth Tst	22.1	23.3	......	1.40
(Accum Units)	22.2	23.4	......	1.40

Prices at Sept. 11. Next dealing Sept. 25.

Stewart Unit Tst. Managers Ltd.

(a) Slater Walker Tst. Mngmt. Ltd.

Southern Cross Management Ltd.

(a) (g) Target Tst. Managers Ltd.

(a) (g) Target Tst. Mgrs. (Scotland)

Trades Union Unit Tst. Managers

Transatlantic and Gen. Secs. Co.

Tyndall Managers Ltd.

Tyndall Nat. and Comm.

(g) TSB Unit Trust Managers Ltd.

(a) Ulster Bank

(a) (g) Vavasseur Group

Anthony Wieler & Co. Ltd.

OFFSHORE AND OVERSEAS FUNDS (p***)

§ Yield %

Albany Management Co. Ltd.

Amer. Express Inv. Mngmt. Co.

Australian Inv. Man. Group

Australian Selection Fund N.V.

Banque de Bruxelles S.A.

Banque de l'Union Parisienne

Bk. of London and S. America Ltd.

Barbican Managers (Jersey) Ltd.

Barclays Unicorn Isle of Man Ltd.

Barclaytrust Frontier Mngmt. Ltd.

Bridge Management Ltd.

Charterhouse Japhet

Darling Management Ltd.

Delta Group

Diploma Fund Management Ltd.

Dreyfus Intercontinental Inv. Fd.

The Dreyfus Offshore Trust N.V.

Ebor Management (Jersey)

Eurosyndicat Group

Eurunion Lux. F.	1.838	1.909	—21	3.67
Finance Union LF	387	408	......	4.35

Agents N. M. Rothschild & Sons Ltd. 626 4356. Hill Samuel & Co. Ltd., 628 8011

F. & C. Mngmt. Ltd. Inv. Advisers
77, London Wall, EC2N 1DD.

Cen'ryFundSept.12	US$7.24	......	—

Fidelity Mngmt. & Res. (Bda.) Ltd.

First National New Issue Fd. Ltd.

Free World Fund Limited

G.T. Bermuda Ltd.

Grimshawe Tst. Management Ltd.

Hambros (Guernsey) Ltd.

Hill Samuel & Co. (Guernsey) Ltd.

Hill Samuel Overseas Fund S.A.

Japan & Far East Secs. Mgt.

Jardine Fleming & Co. Ltd.

Jersey Intnl. Fund Management Ltd.

Jersey Svgs. Bk. Unit Tst. Mgrs. Ltd.

Keyser Ullman Ldn. Agts.

King & Shaxson Mgrs. (Jersey) Ltd.

Kleinwort Benson Ldn. Agts.

L. & T. Mngmt. (Jersey) Ltd.

L. & T. Management Co. S.A.

(z) (c) (t) M. & G. Group

(z) (g) (h) Manx Int. Mngmt. Ltd.

Samuel Montagu Ldn. Agts.

Morgan Grenfell Fds Mgt (CI) Ltd
19 Pollet St., St. Peter Port, Guernsey, C.I.

Channel Islands	94.6	99.5	......	—

Murray, Johnstone (Inv. Adviser)
163, Hope St., Glasgow, C.2. 041-221 5521

*HopeStreet Fund	US$20.84	......	—
‡Murray Fund	US$8.87	......	—

* NAV Sept. 18. ‡ NAV Aug. 31.

Negit S.A.
10a, Boulevard Royal, Luxembourg.

NAV Sept.141973	U.S.$ 10.27	—0.15	—

Negit Ltd.

Old Court Fund Mgrs. Ltd.

Save & Prosper Distributors Ltd.

J. Henry Schroder Wagg & Co. Ltd.

Shareholders Excalibur In. Cp. S.A.

Singer & Friedlander Ldn. Agents

Slater Walker Tst. Mgt. (Jersey)

Standard & Poor's Intl. Fds. S.A.

(c) Standard & Chase Bk. Cl. Ltd.

Target Trust Mgrs. (Cayman) Ltd.

Tokyo Pacific Holdings N.V.

Tokyo Pacific Hldgs (Seaboard) NV

Transglobal Financial Services

Triumph Dynamic Int. Fd. Mgrs.

Tyndall Managers (Bermuda) Ltd.

Tyndall Managers (Jersey) Ltd.

Utd. States Growth Inv. Tst. N.V.

United States Intnl. Adv. Co.

Vavasseur First Investors Limited

Wales Unit Inv Ltd.

S. G. Warburg & Co. Ltd.

NOTES

§ Yield allows for all buying expenses. p***Pence except where otherwise indicated. a Offered prices include all expenses. b To-day's prices. c Yield based on offer prices. d Estimated. g To-day's opening price. h Distribution free of U.K. taxes. x Offered price includes all expenses except agent's commission. y Offered price includes all expenses if bought through managers. z Previous day's price. ♥ Net of tax on realised capital gains. ‖ Guernsey yield. ∮ Suspended. —Not available, exchange restrictions. ◆ Prices not including $ Premium.

UNIT TRUST PRICES

Prices in pence		September 24
NationalGroup (t)		
Nat. Unit 'D' Second Series	163.3	171.1
Century Trust	45.5	47.5
Nat. Consolidated Unit Trust	43.6	45.6
Universal Second Unit Trust	95.2	98.8
Commercial Consolidated	43.9	45.6
Hundred Trust	50.0	51.7
Gas & Electric Second Series	399.0	413.4
Inv. Sec. General Trust	62.2	65.0
Investors General Trust	242.0	252.4
Provident Investors Second	126.0	135.0

BUOY REPLACES LIGHT-VESSEL

Trinity House has replaced the Owers light-vessel, seven miles off Selsey Bill, Sussex, by a large automatic navigational buoy. The buoy, made of steel and weighing about 100 tons, is monitored and controlled from St. Catherine's Lighthouse, Isle of Wight, about 25 miles away.

The Owers was one of the first navigational hazards to be marked by a light-vessel, in 1788.

Bank base rates, Page 29

WEEKLY AVERAGES OF U.K. INDICES

Week to—	Sept. 21	Sept. 14	Sept. 7	Aug. 31
Financial Times				
Govt. Secs.	63.71	63.40	65.58	64.32
Fixed Interest	64.00	63.83	63.97	64.63
Industr'l Ord	424.0	413.5	405.5	416.8
Gold Mines	168.5	153.7	164.2	152.8
Dealings mkd.	656.0	6,160	6,072	6,236
F.T.-Actuaries				
Ind. Group	170.79	167.01	165.76	167.93
500-Share	179.24	175.64	174.48	176.73
All-Share	176.01	174.41	173.30	175.69
20-year Govt.	61.47	61.92	61.65	62.12
Red. Debs.	72.72	60.83	61.49	62.55

INSURANCE, PROPERTY, BONDS

§ Yield %

Abbey Life Assurance Co. Ltd.

Atlantic Assurance Co. Ltd.

Barclays Griffin Life Ass. Co. Ltd.

Wm. Brandt's Sons and Co.

Canada Life Assurance Company

Cannon Assurance Ltd.

Capital Life Assurance

The City of Westminster Assur. Soc.

The City of Westmnstr. Ass. Co. Ltd.

Second Managed Fund

Commercial Union Group

Cornhill Insurance Co. Ltd.

Crescent Life Ass. Co. Ltd.

Crusader Insurance Co. Ltd.

Dominion-Lincoln Equity Assur.

Eagle Star Insur./Midland Assce.

Ebor Phoenix Assurance
4 Gt. St. Helen's, London, EC3.

Assured Bd Sept3	50.9	......	—
End'wments Sp21	52.2	......	—

Fidelity Life Assurance Ltd.
Fidelity House, Corporation Street, High Wycombe. Tel. HW 33821.

Growth & Sec. Life Ass. Soc. Ltd.

Guardian R.E.

Hambro Life Assurance Limited

Hearts of Oak Benefit Society

Hill Samuel Life Ass. Ltd.

Hodge Life Assurance Co. Ltd.

Imperial Life Ass. Co. of Canada

The Individual Life Ins. Co. Ltd.

Investment Annuity Life Assur.

Irish Life Assurance Co. Ltd.

King & Shaxson Ltd.

Langham Life Assurance Co. Ltd.

Life & Equity Assurance

Life Assur. Co. of Pennsylvania

Lloyds Bk. Unit Tst. Mngrs. Ltd.

London Indemnity & General

M and G Group

Magna Assurance Company Ltd.

Mnfrs. Life Insur. Co. (U.K.) Ltd.

Merchant Investors Assurance

Minster Assurance Co. Ltd.

NEL Pensions Limited

Norwich Union Insurance Group

Oaklife Assurance Ltd.

Old Broad Street Secs. Assurance

Phoenix Assurance Co. Ltd.

Prop. Equity & Life Ass. Co. Ltd.

Property Growth Assur. Co. Ltd.

Prudential Pensions Limited

Reliance Mutual

Royal Insurance Group

Save and Prosper Group
4, Gt. St. Helen's, London, E.C.3.

Bal'nedInv Bd	96.3	101.4	+0.2	—
Equity Bonds	85.9	90.5	+0.3	—
Equity PensionFd	96.1	101.2	......	—
Mini Bonds	24.5	25.7	......	—
Property Fds	117.1	125.5	......	—

Scottish Widows' Fnd. & Life Ass. Soc.

Schroder Assurance Ltd.

Scot. Widows' Fnd. & Life Ass. Soc.

Sun Life of Canada (U.K.) Ltd.

Target Life Assurance Co. Ltd.

The Trident Insurance Co. Ltd.

Trident Investors Life Assurance

Tyndall Assurance Ltd.

Tyndall Pensions Ltd.

Vavasseur Life Assurance Ltd.

Welfare Insurance Company Ltd.

Windsor Life Assce. Co. Ltd.

NOTES

§ Yield allows for all buying expenses. p*** Pence except where otherwise indicated.

SHARE INFORMATION SERVICE: NOTES

...otherwise indicated prices are in ... denominations are 25p and ... are in gross percentage terms. ... price/earnings ratios and ... adjusted to corporation tax of 50 ... on imputation system effective ... P/Es calculated on "net" ... bracketed figures indicate ... cent. or more difference if calculated on "nil" earnings. Covers are ... "full" earnings. ... based on middle prices are gross ... for value of declared distributions and rights. ... and lows marked thus have been ... ed to allow for rights issues ... p (or quarterly) since increased ... sumed. ... (or quarterly) since reduced ... or deferred. ... comparable: net dividends paid, ... or report awaited.

†† Banks and Insurance: reserve allocations may preclude calculations of dividends cover.
£ Price at time of suspension.
¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
△ Indicates interim dividend since paid where none was paid before.
•• Convertible loan stock issue in existence.
◆ Merger bid or reorganisation in progress.
♣ Special deposit certificates.
◆ Same interim; reduced final and/or reduced earnings indicated.
§ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
☆ Cover does not allow for shares which may also rank for dividend at a future date. No p/e ratio usually provided.
♥ Excluding a final dividend declaration.
※ Regional price.
¶ No par value.
§ Actual, or net: yield gross.

a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k After local taxes. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. r Australian currency. s Dividends and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, p/e ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yields allow for currency clause. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: cover does not apply to special payment.

A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Figures based on prospectus or other official estimates for 1973. F Figures based on prospectus or other official estimates for 1972-73. G Assumed dividend and yield after pending scrip and/or rights issue. H Excluding refunds of U.S. Capital Gains Tax. J Figures based on prospectus or other official estimates for 1972. M Figures based on prospectus or other official estimates for 1973-74. N Equivalent rate before additional capital was paid up. P Yields based on 1967 payments. T Figures assumed. U No significant Corporation Tax payable. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all.

Money & Exchanges

Bank of England Minimum Lending Rate 11½% (since July 27, 1973)

Short-term interest rates in the ... money market showed ... movements on balance last ... but net changes were ... The three-month sterling ... rate yield fell to 13-12⅞ per ... Wednesday, from 13¾-13⅝ ... the previous Friday, but ... the week at 13⅛-13⅛ per ... The average Treasury bill rate rose 0.0319 per cent. at the week tender, to 10.9826 per cent. Day-to-day credit was in short supply for the most part, with the authorities giving a moderate amount of assistance, through bill purchases, on Monday, a small amount on Wednesday and on Thursday, and a large amount on Friday.

Unsettled conditions were met in the foreign exchanges last week, after the 5 per cent. upvaluation of the Dutch guilder was a tendency for the currencies in the joint-float of certain EEC and associated countries to gather into stronger and weaker groups, with German marks, Danish kroner, and Belgian francs being quoted towards the top of the permitted range of fluctuation, and French francs, Norwegian kroner and Swedish kroner towards the bottom. The pound and the dollar weakened over the week against major currencies in general, with the dollar falling the more sharply of the two. Sterling's trade-weighted average depreciation since the Washington Currency Agreement of December, 1971, widened on balance to 19.30 per cent., from 19.04 per cent., and touched 19.80 per cent. on Monday and Thursday. In terms of the dollar, the pound rose 145 points net, to $2.4230-2.4260. Various Continental moves were made to control flows of exchange. Short-term Euro-marks moved to negative levels. The 3-month discount on sterling, against the dollar, narrowed 0.42c. to 2.87c.

In terms of the Dutch guilder, the U.S. dollar fell 1,235 points, or some 4.6 per cent., to Fls.2.3365, while in terms of the mark it eased 240 points to DM2.4145, and in terms of the French commercial franc 400 points to Frs.4.2500, though in terms of the French financial franc, it rose 315 points to Frs.4.3850.

Gold rose $3 an ounce on balance in London to $103-104.

EURO-CURRENCY INTEREST RATES ◇

Sept. 21 1973	Sterling	U.S. Dollar	Canadian dollar	W. German mark	Swiss franc	Dutch guilders
Short term	15½-14	10-10¾	6½-6¾	(—10)-(—6)	6-5½	6¾-9
7 day's notice	[illegible]	11-11½	6¾-7	(—1)-1	8½-7½	6¾-9
Month	16⅛-16½	10⅞-11⅛	8⅞-9⅛	4¼-4¾	5¼-5½	9⅝-10⅝
Three months	16-16½	10⅞-11⅛	9-9¼	8¼-8⅞	5⅜-5⅞	9¾-10⅛
[illegible]	[illegible]	[illegible]	[illegible]	7-7⅜	[illegible]	8⅝-8¾
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8¾-9⅛

Long-term Eurodollar certificates ... years ... per cent. ... deposit ... 11⅝-11 ... rates are nominal closing rates. ... and Canadian dollars are ... notice for guilders, marks and Swiss francs.

LONDON MONEY RATES

Sept. 21 1973	Sterling Certificate of deposit	Inter-bank	Local Authority deposits	Local Auth. negotiable bonds	Finance House deposits	Company deposits	Discount market deposits	Treasury bills ◆	Bank bills ◆	Fine trade bills ◆
Overnight	—	6-12¾	8-11¼	—	—	11¼	8½-11½	—	—	—
2 days notice	—	—	11¾-12	—	—	—	—	—	—	—
7 days notice	—	—	—	—	—	—	—	—	—	—
One month	[illegible]	11-11½	11½-12½	—	—	—	10½-10¾	—	—	—
Two months	[illegible]	[illegible]	[illegible]	12¼-12¾	12½-12¾	—	10¾-11	10⅝-11⅛	12¼-12⅜	12½-15
Three months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	10⅞-11⅛	10⅞-11⅛	12¼-12½	13-15
Six months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	11-11½	11-11⅛	12¼-12½	13-15
Nine months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	11⅛	—	13-14	13½-15
One year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—

Local authorities and finance houses seven days' notice, others seven days fixed. ... Bank Base Rates ... Finance Houses Association ...

FOREIGN EXCHANGES

Sept. 21 1973	Bank Rate %	Day's Spread	Close
New York	7½	2.4170-.4260	2.4250-.4260
Montreal	6¾	2.4370-.4445	2.4427-.4437
Amst'dam	6½	5.13-.16	5.14½-.15½
†Brussels	6½	87.30-88.40	87.90-88.20
Copen'gen	8	15.63-.85	15.83-.65
Frankf'rt.	7	5.76-.87	5.85-.35
Lisbon	A3¾	56.25-56.50	55.85-56.30
Madrid	††6	138.90-137.95	137.50-.90
◆Milan	6½	1,369-1,557	1,364-1,366
Oslo	4½	13.22-.39	13.27½-.29½
‡Paris	11	10.17-.37	10.29½-.30½
Stockh'lm	5	10.58-.20	10.17½-.18½
Tokyo	7	635-645	641-644
Vienna	6½	42.70-45.60	45.80-.50
Zurich	4½	7.22-.32	7.30½-.31½

†† Basic discount. A Bank of Portugal discount rate. † Rates given are for convertible francs: closing financial franc 87.75-88.09. ‡ Rates given are for commercial franc: closing financial franc 10.39-10.67. ◆ Rate given is commercial: closing financial rate 1,42-1,45.

OTHER MARKET RATES

Argentina ... Australia ... Brazil ... Finland ... Greece ... H'ngK'ng ... Luxemb'g ... Malaysia ... N.Zealand ... Singapore ... S.Africa ... U.S. ... Canada ... C$1=U.S. ... Cent.

FORWARD RATES

New York ... Montreal ... Amsterdam ... Brussels ... Copenhagen ... Frankfurt ... Lisbon ... Milan ... Oslo ... Paris ... Stockholm ... Vienna ... Zurich

CORAL INDEX
Close 419-424

Brussels tests the British developer

BY PETER RIDDELL, PROPERTY CORRESPONDENT

THE FIRST enthusiastic rush of British property men on to the Continent appears to be over, and developers are beginning to face the real test of their commercial judgment: whether they can successfully let their buildings. This applies especially in Belgium, the first country in which British property groups became involved on a large scale, and where tough credit controls have recently been introduced which will severely limit the scope for raising money locally.

The total U.K. investment in Belgian property is now at least £200m., and considerably more if the full completed value of developments under way is taken into account. This consists of more than 50 schemes, nearly all office buildings in Brussels. Although there are more U.K.-owned sites in Paris, the relative level of market penetration is probably greater in Brussels.

Estate agents

This can easily be seen in a casual stroll along the Avenue des Arts, in the streets running off it in the Quartier Leopold or in the Avenue Louise, where there are British estate agents' boards almost every few yards. Agents—notably Jones Lang Wootton and Richard Ellis from the U.K. and Jacques de Duve, a leading Belgian firm—have played a major role in stimulating British developers' interest.

The list of companies includes major U.K. groups such as MEPC, Star, Town and City and Amalgamated Investment, but many of the most active developers in the city are less well-known, medium-sized companies like Lynton Holdings, Law Land, Grosvenor Square and Beazer.

Although some of the early British acquisitions have been completed and fully let, the bulk of the investment is in office schemes in Brussels bought in the past couple of years and the main worry is that the increase in office building will produce an over-supply situation.

The threat of a glut of office space has been a familiar part of the Brussels office scene since the early 1960s when the first speculative schemes began. Until then, most buildings had been constructed for owner-occupiers, but Belgian contractors—backed in some cases by foreign money—started to develop. This produced an over-supply in 1964-65 and rents fell for a period before the space was taken up.

Pioneers

The first British developers moved in on a very small scale in 1962-63. Among the pioneers were Richard Coopman (now very active on the Continent with his London and Overseas group) and Harry Hyams. A few more U.K. developers such as Oddenino's became active again in the mid-to-late 1960s, when a further glut developed.

This lasted until 1970 and although it was, in fact, an ideal opportunity for developers to start schemes, most British groups stayed away. But when the over-supply ended in 1971 they started moving back in again in greater numbers with an almost hectic rate of activity last year.

The reasons for the general expansion of U.K. property activity on the Continent are clear: the stiff competition and planning difficulties in Britain and the relatively higher level of returns overseas. The more significant question is why developers went first to Brussels and only later moved in great numbers to Paris. The obvious explanation is that Brussels is a relatively easy place in which to operate. Until recently, there have been few difficulties about raising money or obtaining planning permission for office building.

Until this year, both investment and development yields were generally higher than in other places on the Continent, except Paris. They were at least three points above prime office yields in Central London, the latter having dropped from over 6 per cent. to around 4 per cent. Now the gap is slightly smaller.

The most spectacular example of this expansion was the Abbey Property Bond Fund's acquisition of the Tour Madou, a 33-storey office block in the Avenue des Arts, for more than £7.5m. last autumn. Then, earlier this year, MEPC bought a large stake in the office and shopping content of the massive Manhattan Centre for £18m. These acquisitions underlined the growing British interest in Brussels and led to some criticism in the local Press. But there is a danger of exaggerating the purely British involvement because of the large number of obvious indicators, such as estate agents' boards.

Competition

There is a lot of other foreign money in Brussels property, particularly from Germany and Switzerland. MEPC bought its stake in the Manhattan Centre against stiff competition from a leading German bank, while along the Avenue Louise there are Swiss, French, Italian and U.S. companies and funds in addition to ten or so British schemes.

It would also be misleading to underrate the activities of Belgian groups. Many buildings are still being developed by Belgian contractors, such as Herpain, even in areas where the British are most active. One of the most interesting large long-term projects, the World Trade Centre, is being developed by a local group run by M. Charles de Pauw, although foreign companies, such as Triumph Investment Trust, are taking an interest in parts of the multi-tower complex.

Most of these schemes, given the normal development cycle, should only start coming on the market from the New Year onwards. Meanwhile there is a shortage of new space but a very strong level of demand. The expansion of the EEC does not seem to have had much influence so far, although a number of concerns with offices in Brussels have expanded their representation.

The main increase in inquiries has come from local bodies which accounted for perhaps 30 per cent. of demand in the mid-1960s and are now responsible for 70 per cent. This includes both commercial interests seeking better facilities in order to attract staff, and administrative tenants like the Belgian Government. There has been a steady stream of lettings in new buildings and Jones Lang Wootton, for example, reports that so far in 1973 it has let 80,000 square metres, compared with 60,000 square metres up to September last year.

Pre-letting

Because there is so little on the market, the main effect of the increase in demand has been to produce a large amount of pre-letting activity for the first time—and to push up rents sharply. Rents in the top location in the Avenue des Arts are now around BFrs.3,250 a square metre for new space and BFrs.2,750 plus for modern buildings in Avenue Louise, an increase of over 10 per cent. in the last year.

The market should continue to favour the developers for the next year to 18 months, but will alter as supply increases. The most widely accepted figures show that while some 174,000 square metres have become or are due to become available in 1972-73, at least 390,000 square metres should be completed in 1974-76. The increased demand and pre-letting activity may push back the date of glut from late 1974 to the summer or autumn of 1975, but few observers doubt that there will be an over-supply lasting for perhaps two years.

This has led to a debate between the U.K. agents about the relative attractions of various parts of the city. No one disputes the merits of the Avenue des Arts, but some observers believe that other parts of the Quartier Leopold will suffer because they are not sufficiently different to draw tenants. Others are sceptical about the prospects for sections of the Avenue Louise, although it has been establishing itself as a major office area with several schemes and the arrival of certain big groups such as ITT.

Head offices

There does, however, seem to be a danger of the British trying to impose an office pattern on the city similar to the one in London. The situation in Brussels is much more fluid. Some of the highest rents have been paid outside the centre in the Boulevard de Souverain, where there are a number of major head offices. The World Trade Centre is also making good progress and attracting major tenants in an area which has until recently been rather rundown.

Similarly, few British developers have been active in the lower town, the historic office district near The Grand Place, where a number of major Belgium-owned schemes are under way.

All this provides an added element of uncertainty and there have been plenty of warnings about over-enthusiastic British developers buying schemes at very high prices in poor locations. But it is still possible to arrange profitable schemes taking into account the probability of a year or two without tenants—which is what happens in many British provincial towns. One British agent has acquired a development in the Quartier Leopold which can remain empty for up to eight years on present rents and yields without showing a capital loss. Whether others have been as cautious is less certain.

Antwerp

A number of U.K. companies are now wary of buying new schemes in Brussels and prefer to go elsewhere. Several are looking outside the Brussels office market to the shopping and industrial sectors, especially the latter, and at least half a dozen new industrial estates are planned or being developed by U.K. companies near Brussels airports. A number of office buildings have been acquired in other parts of Belgium, notab in Antwerp, though the sco is limited by the size of t country.

The scale of this expansi has aroused some comment, b local observers do not anticipa any specific measures to restri the amount of foreign activit The main question mark is ov the effects of the recent cred squeeze, which has pushed i interest rates sharply and pu a ceiling on the amount whi can be lent by Belgian Instit tions. Most of the existi schemes have already be funded, though refinanci problems could occur.

Dollar premiu

While these proposals—whi are short-term at present—a likely to act as a further bra on British expansion, th could also lead to some co panies bringing in finance v the eurodollar market or fr the U.K. under the rule whi allows £1m. per project p year to be exported witho going through the doll premium. Given the cost money in the U.K., this is like to mean that more develope will link with U.K. insuran companies and pension fu eager to move into Brussels."

There are signs though, th the developers' job may beco more difficult because planni controls may become mu tighter. But despite this a the medium-term worries abo the supply situation, Brit property activity in Belgium acquiring a momentum of own, ensuring a continu important long-term role f U.K. groups.

Terry Kirk

The Tour Madou in Brussels, bought by Abbey Property Bond Fund for over £7.5m.

Wimpey takes delivery of tug/supply ship

THE FIRST in a series of three tug/supply vessels for Wimpey (Marine), of London, the Wimpey Seadog, has been delivered to her owners after completing successful trials.

It was built by Appledore Shipbuilders in North Devon. Wimpey Seadog is 193.7 feet overall, 41 feet beam and a draught of 16 feet loaded with a cargo deadweight of 1,040 long tons. On a draught of 18 feet the cargo deadweight would be about 1,490 long tons.

The clear cargo deck is 108 feet in length and 31 feet in breadth and is stiffened to take point loads, is timber sheathed and is capable of carrying up to 600 lo tons of cargo.

A model of the ship was ext sively tank tested to achi exceptional sea keeping qualit and consequently Wimpey Sead has a greater freeboard a draught than other vessels of t type.

On sea trials, the vessel ma an average speed of 14 kn while carrying 1,000 tons de weight cargo. The twin ma engines were supplied by B a W Alpha, of Denmark, runni at 825 r.p.m. and develop 2,810 h.p.

New Home for Commodities Futures

FINANCIAL TIMES SURVEY

ocal but far-reaching move

OHN EDWARDS

move of the commodity markets from Plantation Mincing Lane, to the Exchange building in ane is a small one in of distance — a few d yards. But the changes esult of this short move een far-reaching for one City's most important le-known institutions.

start, the new premises Corn Exchange include galleries allowing all the o see what is going on different from the tly secretive markets away in the maze of s in Plantation House. rmer air of somewhat tradition, given by old- ed furnishings and sur- gs, has been swept aside placed with eye-catching colourings and ls. There are telephones everywhere, and tele- monitors relentlessly vital information on est moves in market nderlining the immense ment in communica- The bright—rather tou — new premises have a commodity trading nade up of several units osed to the previous haphazard collection of al markets.

emains aloof

the London Metal Ex- remains aloof at its emises in Whittington and somewhat strangely ne-grown grain futures have opted to stay at lie instead of moving Corn Exchange, which ses the Mark Lane grain —now a floor above the mmodity trading centre. less the grouping of "—that is, non-metal— markets into better premises, with more room for expansion, should strengthen the efficiency of them considerably once the initial teething problems are solved.

Some may dislike the brightening up of the markets, since commodity trading is steeped in tradition. But it is the price of progress. An improvement in communications especially was long overdue if the London commodity markets were to retain their international standing. The flow of information as speedily as possible to and from all sources is the lifeblood of successful trading in commodities, especially in London where the markets are dependent on a large volume of overseas trade and interest.

It is important for the City of London, and Britain as a whole, that the commodity markets should retain their international prominence and expand where possible. A large slice of the so-called "invisible" earnings, so helpful to Britain's balance of payments, come from the commodity markets whose daily turnover far exceeds that of the Stock Exchange, and the flow of raw materials being sustained to industry is vital to the prosperity of the country.

London's leadership in international commodity trading was established because Britain was one of the first industrialised countries and a massive importer of food and raw materials, through its own lack of domestic resources.

Although Britain's role as a dominant buyer on world markets has diminished following the growth of other industrial nations, the London commodity markets have retained their international status. The City expertise built up over many years in shipping, finance and insurance have all helped; so has the geographical location of London, links with former colonies and a world reputation for fair dealing, respected by East and West alike. At the same time, the long tradition of commodity merchanting and broking in Britain has been invaluable in keeping London a step or two ahead of other commodity trading centres.

The futures markets are an important part of successful commodity trading. They provide "hedging" facilities where traders can insure themselves against the risk of unexpected price movements which could easily bankrupt a business overnight. Without the protection provided by the futures markets trading activity by the consumer, producer and merchant would be severely limited by the risks involved. Passing on the risk of unpredictable price changes to the futures market allows those concerned with the physical raw material concerned to concentrate on that task instead of having to gamble on guessing the price trends right.

Hedging facility

The futures markets also play a vital role in establishing price trends that take all influences into account, not just those of basic supply and demand. In recent years hedging against currency uncertainties has been an increasingly important factor in the commodity markets, where price values have had to reflect the changing values of international currencies like the U.S. dollar and sterling.

Much publicity has been given lately to the speculative element in the commodity futures markets with suggestions that speculators have distorted and inflated the price of raw materials. This has been linked with the heavy losses suffered by some traders in futures dealings, notably the horrific sum of over £32m. lost by the Rowntree Mackintosh group in the cocoa futures market.

It is obviously true that speculation in the futures markets has grown strongly in the past few years. This is partly due to the influence of the U.S., where commodity trading is much more orientated to the speculator and to the growing interest of Americans in using alternative markets to the domestic ones to get an almost round-the-clock coverage. More important, perhaps has been the general uncertainty created by inflation and currency changes persuading those with surplus funds to protect them by putting them into raw materials that retain their basic intrinsic value whatever happens to "paper" money.

However, it should be remembered that speculative influence on futures prices must inevitably be of short-lived duration. A speculative buyer for example, must eventually sell out his purchase before the delivery date falls due and every transaction made, whether sale or purchase, must be cancelled out by a matching transaction. Thus a large volume of buying at one stage will later create an equally large volume of selling. In the long run it is supply and demand factors that control raw material prices.

Necessary finance

While speculators may well take money out of the market in the form of profits, on balance it is estimated they contribute at least as much as they take out. In addition, a good flow of speculative money is needed in the operation of any successful futures market to provide the necessary financing for trade hedging facilities.

To make a hedging sale, for example, there must be a willing buyer and the speculator often provides that essential "other" side of the market for the trade. Without these extra speculative funds, the futures market could well be distorted even more and move out of line with the physical commodity, thereby undermining the whole purpose of the futures hedge.

The losses made by Rowntree were not the result of wicked speculators taking advantage of some poor innocent. It was a calculated gamble, or speculation, by the company to use the futures market to reduce the cost of its cocoa purchases, if possible, and make extra profits in the process. Rowntrees, like other manufacturers, has conducted such operations highly successfully in the past but came badly unstuck on this occasion. The fault was Rowntrees in exceeding the normal hedging facilities—not the market's.

Incidents of this kind, and a rise in raw material costs at a time inconvenient for governments, always leads to proposals—often totally unrealistic —for altering the structure or operation of commodity markets. On the surface they certainly do seem somewhat haphazard and archaic, with prices apparently being decided by groups of men shouting at each other all day in frenzied bursts of activity. But the "open cry" system of trading has evolved after many years of experience as the best method that has stood the test of time, and the trend of prices is governed by world market forces far beyond the control of individual or even a group of Governments.

For Britain to take the lead in any radical "reforming" of commodity futures markets would seem to be the height of foolishness, since it gains more than most from the present system and should encourage rather than hinder the expansion of a business that brings considerable rewards to the City and country as a whole. With trading in actual physical commodities moving away from Britain into direct transactions between producing and consuming countries, the development of futures markets is the most promising area for expansion using the special skills available in the City of London. The move to new premises is an important step to ensuring that the British markets keep up with the times and sets the stage for expansion.

COMMODITIES II

Served by real-time computer system

By DAVID McILWAIN

With the official move to its new Mark Lane premises to-day, the International Commodities Clearing House is launching the first phase of its new real-time computer system, INTERCOM. This is a noteworthy event because real-time systems, leaving aside banks and airline bookings and a few other high level applications, have been remarkably slow in getting off the ground, and even in the U.S. have hardly impinged upon commodity markets.

Commodity brokers make extensive use of computers, it is true, but not in a real-time mode. Batch processing is the rule, in which the total of the day's transactions are processed and analysed overnight to provide in paper print-out form all the information necessary to start the next day's dealings. This 24-hour turn-round service, usually carried out by computer service bureaux, has generally proved to be adequate.

Real-time working is a more complex concept. It means that updated information and working data, such as the validation of new trades against current market prices, can be obtained instantly and at any time by tapping a few keys on a terminal linked to a central computer. The terminal has a video screen on which the wanted data is displayed, and the information can be transferred to teleprinters located on the market floor.

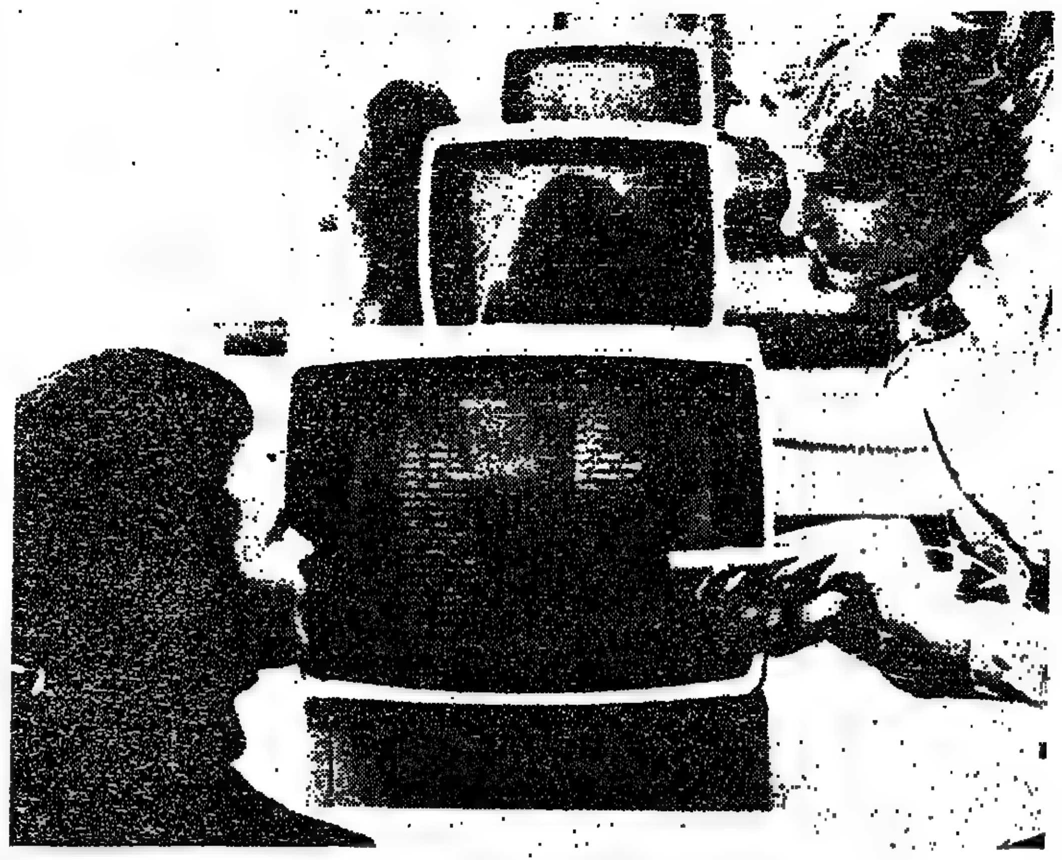
Such a terminal, installed in a broker's office, will provide direct access to computer files to check on client's positions, including trades completed only a few minutes earlier and revalued at the current market price. In addition, floor brokers will receive throughout the day print-outs of individual lists of recorded trades.

The justification for real-time working is largely the ever-increasing volume of transactions in the commodity markets, and in particular the bottleneck of data preparation for computer input. In the case of ICCH, operating as a clearing house, this kind of service is becoming essential in much the same way as real-time is to the clearing banks.

Sizeable bureau

To put the INTERCOM project into its correct perspective it is worth noting that of the 125 staff employed by ICCH at its administrative HQ, some 70 are employed in computer services of various kinds, which makes it a sizeable service bureau by any standards. The hardware is impressive enough: two IBM 370/135s using 192k disks, plus stand-by generators in the event of power cuts. The on-line terminals are IBM 3270s. One of the machines is also used for development work by 30 systems analysts and programmers.

That said, it is necessary to add one or two riders. There are two ways of plunging into the real-time data processing market. One is to resolve a growth situation with which manual techniques can no longer cope (for example, reservations, banking, etc.), and the other is to set up a terminal network capability in anticipation of such a growth situation, often before the market has demonstrated its viability. Many a good real-time system has foundered on the latter premise because of a sluggish response and cash-flow problems in the first year or two.



IBM 3277 visual display—part of the 3270 information display system.

The ICCH system tends to fall into the second category, although at this inaugural stage it has itself as client No. 1. However, director Ian McGaw can count on at least 20 on-line terminals installed by the end of the year to serve ICCH members. This would appear to be an adequate launching pad for 1974, bearing in mind that INTERCOM is only one aspect of the clearing house's work as a computer service bureau.

McGaw admits that "we've decided to set up a real-time system in advance of market demand," but adds, "basically we are a clearing house for dealers in soft commodity futures and we give financial guarantees for due fulfilment of contracts. To be even more effective we are deliberately opting for a more highly advanced computer technology."

The Mark Lane commodity markets have grown enormously over the past decade, and are the largest in Europe. And, says McGaw, even though there are larger markets in Chicago for grains, soyabeans and so on, "we can claim to be well ahead of the Americans."

What about the hard commodities—the London Metal Exchange, for example? The ICCH does, in fact, consider some form of computerised integration with the LME as a possibility, though not necessarily in the short term. It states that "new business on the LME will not initially be included in the client's positions during the real-time day, although, depending on our members' requirements, this facility will be introduced."

The LME does not have a clearing house. The brokers who attend the ring dealing sessions go off afterwards to do their own thing. Consequently, the LME tends to regard real-time computer integration with the ICCH as a "pious hope" — qualified, however, by the somewhat negative though by no means prohibitive comment that there are no signs of movement in that direction at present."

There is evidence that the LME itself is favourably inclined towards setting up its own computerised clearing house for members, but the trouble is that half the members are for it and half against it. Perhaps metal brokers tend to be prima donnas and "loners," and there may well be historical and geographical reasons for this. But in the long term the LME takes the view that a computerised clearing house has got to happen sooner or later, and the sooner the better.

Varying extents

Nevertheless, LME brokers do use computers to varying extents, though not in real-time. One of the biggest organisations, Rudolf Wolff, a founder member of the LME, devised its own system and software in conjunction with a service bureau more than five years ago. At that time Wolff's computer manager, Harry Kubel, used his own name as an acronym for the system: Helps Ascertain Results Required Yesterday.

To-day Kubel is looking at real-time operation and thinking in terms of "having to-day what you would have to wait for to-morrow," which doesn't make an acronym but sums up the attitude of many of the larger brokers in the face of increasing world-wide business, not to mention foreign exchange instabilities.

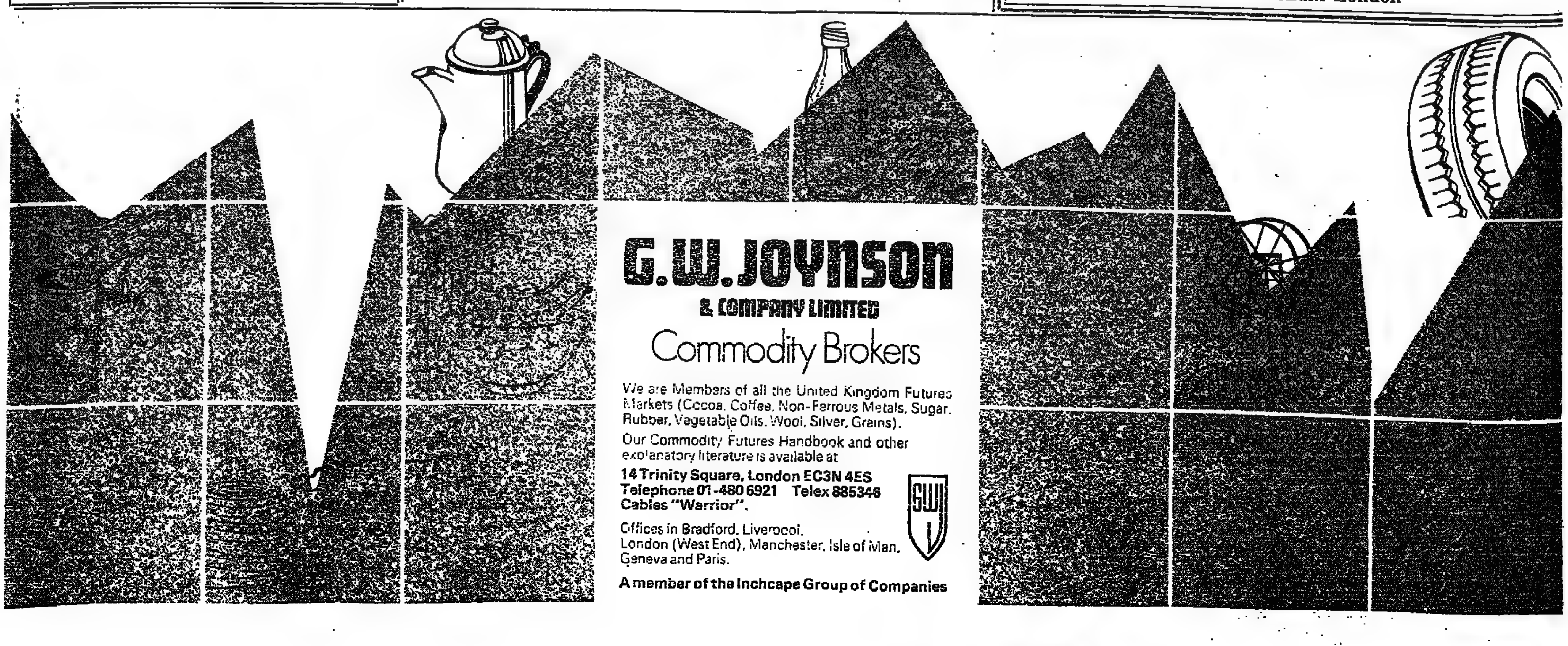
The trouble is that, according to Kubel, 99 per cent. of the information required will do to-morrow, anyway. The remaining 1 per cent. which can't wait is mainly same-day validation and data preparation, and these have always been a problem. The most difficult part of the process is getting the information into a suitable form for computer processing.

If Kubel's assessment that only 1 per cent. of information needs to be in real-time mode (and that consisting mainly of input) then one might reasonably question the economic validity and cost of setting up an expensive real-time computer-terminal capability. But the market will materialise, inevitably, though it may take longer than many prophets have forecast.

Certain service bureaux specialise in City work, and many are geared to provide real-time facilities if required. Wolff, for example, has been happily assigning its 99 per cent. batch processing to the City bureau Datasolve International for several years, and Datasolve can go real-time at the drop of a terminal to handle the other 1 per cent., if required. There are, of course, others waiting in the wings.

Taking the computing scene as a whole in relation to the commodities markets, the ICCH's INTERCOM service is at least a courageous venture and, in view of the potential competition, possibly intended to be pre-emptive.

Perhaps the more cynical observer of the fast-moving computer industry would be inclined to say: "Come back in two years' time—by then things should be settling down a little and it may be possible to make a reasonably accurate forecast of trends." For the moment, however, INTERCOM seems to be off to a head start without necessarily enjoying the loneliness of a long-distance runner.



Ɩnprecedented boom marked by pectacular price rises

)HN EDWARDS

ıodity futures markets joyed an unprecedented uring the past year. In conditions which were ectic cocoa and sugar reached new all-time levels and there were dar climbs in the values e, rubber and wool.

urge upwards has been by supply shortages at of buoyant demand, and ra rush of speculative attracted not only by ng markets but also by ire to put money into terials at a time when arkets are falling and ue of "paper" money ng eroded by inflation anges in the inter- exchange rates.

ng against currency un- es, both by the trade culators, have been a rly important influence arkets. So has inflation. good sense to buy in ost certain knowledge commodity in question be worth a good deal a few months' time.

ably the steep rise in as brought very volatile ıs and violent fluctuations in values, especially at the higher price levels. Big profits have been made by trade and speculative buyers, but some big losses have been suffered too.

Cocoa/loss

This has been particularly true of the cocoa futures market. The announcement of a loss of over £1m. by a broker was soon followed by the far more spectacular losses suffered by Rowntree Mackintosh, now known to be in excess of £32m. These setbacks could not have come at a worse time for the "image" of the cocoa futures market, but undoubtedly the need for these companies to cover their outstanding positions influenced prices for some time.

But the fault for these excessive losses does not lie with the market, which showed its strength by the ability to absorb two such sudden blows with little apparent effect. It is rather like blaming the Tote for the fact that your horse failed to win. Like several other leading manufacturers Rowntrees "read" the market wrong, but instead of recognising this fact and cutting losses, the company poured in more money to try to ride out the situation—until the cost finally became unbearable.

It can be claimed that speculative buying, especially currency hedging, possibly forced up prices faster than justified by the supply-demand situation.

But the fact is that there is, and has been for some time, an acute shortage of cocoa supplies. Throughout the year supply-demand forecasts were adjusted from a small surplus to a huge deficit. Production was unexpectedly hit by droughts in the main producing areas in Brazil and West Africa, and by the previously low level of prices. Demand on the other hand rose sharply as industrial activity recovered, encouraged too by the previously low prices. Despite the move to higher levels consumption has remained remarkably strong. In these circumstances cocoa producers have been able to sustain a strong selling policy and to make sure that the full extent of the lower value of the U.S. dollar and sterling were reflected in world prices.

Much depends on the size of the forthcoming West African main crops in deciding future price trends. Consumption is turning downwards, although rather slower than expected, but it will need sizeable crops to bring world stocks back up again to satisfactory levels. Meanwhile a new influence in the future of the market could be the International Cocoa Agreement, with its complicated formula of buffer stock buying and quotas aimed at stabilising prices within agreed levels. At present world prices are far above the level at which the agreement would start to operate and there is no chance at present of building up a buffer stock of surplus supplies.

However, the safeguards provided by the agreement may encourage producing countries to step up output faster than they have done in the past, knowing that a surplus will not bring an immediate collapse in world prices.

Sugar agreement

The International Sugar Agreement, covering the free market not covered by special trade pacts, is currently being renegotiated in Geneva since the existing agreement expires at the end of the year. The problems to be tackled seem so immense and complicated that many people doubt whether an effective agreement can be resolved from so many conflicting interests, although the existing pact provides an existing formula to use. What emerges from Geneva, and the negotiations in Brussels over the future of Commonwealth sugar sales to the EEC, are so important for the futures markets that it is difficult to predict the future course of events.

At the moment, however, sugar supplies worldwide remain in short supply, with world stocks at a very low level as a result of consumption exceeding new production for several years. This is the reason why prices are still at such historically high levels. Crop prospects in the main producing areas look good at present, and demand must be feeling the impact of the high prices, so there should be a move to lower levels. But world stocks are far below what they should be, and any crop setback could quickly reassert the squeeze on supplies.

The coffee market has entered a new era folowing the failure to renegotiate an effective international agreement to replace the pact expiring at the end of September. The agreement has been extended for two years, but with no provisions for price ranges and export quotas to control supplies. In effect this means a return to free market conditions.

This breakdown in the agreement resulted from the failure of producing and consuming countries to resolve their differences over adjusting prices following the first U.S. dollar devaluation. This led to the main producing countries deciding to take the situation into their hands by withholding supplies from the market and disregarding the agreement quota and "trigger" price levels. As a result the consumers said there was no point in continuing in the agreement if producers acted unilaterally.

At present, because of crop shortfalls, notably in Brazil, which have reduced world supplies to a low level, the producers have managed to establish control themselves. Plans are in hand to reduce consumer stocks to lower levels and prevent surplus supplies from undermining agreed "minimum" price levels.

However, at present consumers have more than adequate stocks in hands and hope to be able to hold out longer than the producing countries, which it is argued, tend to argue among themselves and have not sufficient financial resources to hold off enough supplies for long enough. The next few years promise to be extremely interesting, with much depending on whether bumper crops will exert too much pressure on the producers, or poor production undermine the consumers' position.

Adequate stocks

Natural rubber prices have gained strongly this year, as a result of the recovery in industrial activity creating strong demand. So strong was demand that it swept away the surplus stocks built up by the Malaysian Government when the market was depressed and shrugged off increased sales from the U.S. stockpile. It is difficult to estimate, however, how much of this was stockpiling by consumers against currency fears and inflation. Certainly, the higher interest rates have brought a downturn in values at a time, however, when consumption is normally at a low ebb because of the summer holiday period in the main consuming countries.

The crucial question is whether this autumn or early next year will see a downturn in the U.S. economy, as is being widely predicted, and therefore a lessening in demand for rubber as industrial activity

Continued on next page.

ew markets futures

HN EDWARDS

ırt of three new futures has coincided with the he commodity markets Corn Exchange. The oil futures market has ived in the hopes that ccasion it will attract terest and achieve a y high turnover to pro- European trade with ent hedging facility. vegetable oil market oil is to start shortly, ould help stimulate n both markets and lead to a general ering oilseed products largely interchange-

market for arabica e has also been started ment the existing con- ed on Robusta coffee got off to a promising tea futures market is er consideration and moves afoot to con- existing rubber ter- arket into an "open tract.

w markets for soya- and arabica coffee will dependent on support raeas, particularly the , to have much chance . They are both traded dollar prices, which shuts off speculative from U.K. residents traders with special ngland permission are trade in foreign cur- ntracts.

same time the main in the physical com- nd therefore the major hedging facilities, is n the Continent, which re dependent on soya- l soya oil than Britain a far greater user of coffee. Britain uses obusta coffee in the blends that dominate e in what is still a tea-drinking nation. on for the new arabica planned from a new contract.

ging facilities

markets for soyabean rabica coffee already e U.S. in Chicago and , respectively, so hedg- ies are already avail- ever, the U.S. markets swayed by domestic that might have a different impact in

nt example was pro- the U.S. Government to restrict exports of products. This was depressing for Chicago ices, but pushed values e U.S. to much higher that case, therefore, ropean oil crusher n the Chicago futures would have received ion at all against price s, since the futures sical markets were in totally opposite

ly, however, U.S. and markets tend to move ne direction and there al opportunities for buying in one mar- selling in another— e move out of line.

nt years the London y markets have had a ord in starting new ntracts. Cotton and failed to establish s, despite an initial burst of enthusiasm; the soyabean oil market has only just been revived after being forced to close through an absence of trading activity. Several changes of contract, including the introduction of a greasy contract, have failed to revive interest in wool futures trading and the centre of activity in wool futures has now passed to the Sydney market.

Only the home-grown barley and wheat futures markets have managed to survive among recent introductions, and there must be doubts about their future viability in view of Britain's entry into the European Common Market theoretically at least stabilising grain prices and lessening the need to hedge against price fluctuations.

Difficult problem

So far, it is the markets dependent on Continental support, without sufficient U.K. interest to keep them going, that have failed. It is a difficult problem. The U.S. dollar, despite its recent tribulations, is the main currency used for international trading in commodities and is, therefore, the natural currency for use in the futures markets. However, as explained, a dollar contract excludes support from U.K. speculators because of currency control restrictions, and without this backing from speculators, initially at least, it is difficult for a new market to achieve sufficient volume to provide effective hedging facilities. It is a vicious circle no one has managed to break so far.

Britain's entry into the Common Market may provide new opportunities, bearing in mind that the enlarged EEC Community, should provide one of the largest domestic markets in the world sufficient to sustain futures markets of its own without outside support. The main scope appears to be for farm products, not controlled by the Common Agricultural Policy—such as eggs, potatoes, broilers, bacon, animal feedingstuffs and vegetable oils and meals. But the potential list of possibilities is much wider, judging by the U.S. example, where there are futures markets for such diverse products as pork bellies—one of the most successful—and Florida orange juice.

Perhaps the most exciting possibility, however, is the suggested chemical futures markets to which Imperial Chemical Industries have given serious thought and attention. It is recognised that a futures market might have done a lot to even out the price fluctuations of recent years and provided manufacturers with protection against losses suffered. The introduction of a futures market for chemicals could lead the way for trading in allied products as well and open up a whole new area of expansion.

Certainly, if London is going to retain its valuable place as the main commodity trading centre in Europe it will have to be prepared to risk a few more failures in the necessary search for widening the usefulness and influences of its commodity markets by establishing successful new contracts.

COMMODITIES IV

Growing interest in options trading

By JOHN EDWARDS

The violent fluctuations in commodity prices have greatly increased interest in the "safest" way to trade, without risking heavy losses, through options. Indeed, at one stage a "double" option was described almost as a licence to print money, since the premiums were pitched at levels far too low for the risks. In the U.S. enthusiasm for options in commodity trading mushroomed to such an extent that it encouraged the growth of dubious and unsafe practices that led to several fraudulent scandals and brought the whole idea into bad repute in America.

Far steadier

In Britain, however, the growth in option trading has been far steadier and more soundly based. The main difficulty is in finding grantors of options, since granting an option entails risk taking and needs considerable resources or expertise if the whole system is to work properly. So far producers, or large consumers with surplus stocks in hand, are in the main generally badly informed about the advantages in granting options.

In the U.S. the difficulty in finding grantors was overcome by dealers taking on the task themselves and hoping they would be able to match them up or use the premium money to make sufficient profits on the futures markets. Not surprisingly this failed to work and incalculable harm was done to the image of commodity option trading.

There are sound advantages for grantors, especially those with recourse to surplus supplies. In effect the grantor can use options to help finance stocks or sell ahead with a useful premium added. On balance the premium money, if pitched at the right level, should give the grantor adequate reward for taking the risk. High interest rates should add to the attractions of granting in view of the steep rise in the cost of carrying stocks.

For trade or private speculators in commodity markets option trading is particularly attractive, since the potential losses can be limited to a specific, known, figure but the rewards can be increased substantially by "jobbing" the market using the option as a sound base.

The biggest danger to the buyer of options is that the market prices will stagnate and not move much either up or down. In that case the premium is an extra loss, so options work most successfully in times of wildly fluctuating values.

The buyer (or taker) basically purchases an option to buy a specified quantity of the commodity at an agreed date and price (known as a call option) when he considers prices are going to rise and he can subsequently sell at a profit. When prices are expected to fall the buyer purchases the right to sell a specified quantity at an agreed date and price (known as a put option).

Loss confined

A double option, usually costing roughly twice the amount of a put or call, gives the buyer the right to buy or sell at an agreed date and price. This option can be exercised at any time up to the agreed date, if the market has moved in the right direction. If it hasn't, the buyer simply does not take up the option and his loss is confined to the premium paid.

However, during the option period the buyer can use the option to buy or sell as the backstop on which to base further direct operations on the futures market, knowing that the option can be exercised if things go wrong. Thus if the right to buy 50 tons of cocoa has been bought with a call option and the market starts to go down, the trader can sell 50 tons on the futures market knowing full well that if the worst comes to the worst he can always cancel the sale by exercising the buy option. However, if the market does fail sufficiently for a useful profit to be made, he can take the profit and still have the option outstanding to back his original prediction that values would rise.

Options can also be used to take advantage of situations where the nearby, or spot price, is either at a large discount or large premium to the forward months. If the spot quotation is at a large premium (a backwardation) the price will be working automatically in his favour if he purchases a "call" option at the lower forward price level.

Variations on the options theme, and the way they can be used to advantage, are considerable. Their usefulness depends on the individual's circumstances, the state of the markets at a given time, and the size of premiums being charged. The premiums are being adjusted constantly in line with price movements in the markets and demand from takers. Nevertheless, option trading does offer at any time a way of trading in the commodity markets with a large element of the unknown risk being removed.

Commodities trusts make the running

By ROY LEVINE

The unit trusts that have made the running this year have been those investing in Europe or commodity shares.

The latest edition of Money Management shows that five of the top ten performers over the past six months are commodity funds. Of these, the top performer has been Drayton Commodity with a 20.4 per cent. appreciation if net income is included.

At the lower end of this short table are Britannia Commodity Plus (up 13.9 per cent.), Ebor Commodity (up 12.1 per cent.), Jessel Plantation (up 11.6 per cent.) and Vavasseur International Mining (up 11.6 per cent.).

This is not surprising considering the strong upward moves in most commodity prices until recently, resulting from the world-wide industrial boom and currency movements. Those trends are a strong contrast to weak investment sentiment in London and hence poor performances by unit trusts with U.K. share portfolios.

However, a glance at the accompanying table puts the matter in perspective. It highlights the volatility of commodity trusts and lends credence to the view that, as a rule, these funds are not necessarily for long-term investors.

Over short periods, commodity trusts have shown phenomenal growth and, provided you can get the timing right, there are large profits to be made. But these trusts should be traded rather than held as long-term investments.

Differences in growth rates for 1973 between the table and the figures from Money Management largely reflect different methods of calculation and a poor offtake for some of the funds earlier this year.

Another often misunderstood feature about these funds is that they provide high income. That is usually true in depressed times when the high yields on commodity shares reflect the higher risk-reward ratio. But as capital performance grows, the yield on a portfolio of such shares is diminished. And in most cases the fund managers do not have as their main objective the maintenance of a higher than average yield on the portfolio.

HOW THEY PERFORM

Fund	% rise or fall 1973	1972	1971	1970	percentile ranking 1973	1972	1971	1970
Drayton	+ 2.9	+41.1	+37.6	+11.1	3	9	69	3
Vavasseur Int. Mining	+ 1.3	+19.7	− 7.6	−19.2	5	57	100	96
Britannia Commodity	+ 0.8	+31.7	+36.6	+ 3.6	5	19	73	8
Jessel Plantations	− 1.7	+32.3	+40.0		6	17	58	—
Ebor Comm.	− 3.4	+46.1	+28.8	− 5.3	8	5	90	53
Natural Resources	− 4.3	+27.3	+17.2		9	29	—	—
Allied Metals	− 6.7	+24.2	+ 5.7	−19.4	16	40	97	97
Jascot N. Sea	− 6.2	+ 3.2			14	—	—	—
Jascot Commodity	−11.8	+44.6	+34.0		30	6	—	—
Vavasseur Oil and Energy	−12.6	+24.6	+15.3	−12.8	36	38	96	88
Ebor Energy	− 3.6 (launched in January)				—	—	—	—

Source: G. S. Herbert and Sons.

Average yield

At the moment, for instance, a rough average yield on the funds is around 4 per cent., which is almost the same as the yield on the F.T. Actuaries All-Share index.

Drayton Commodity, one of the most successful, now offers a yield of 5 per cent. But the Drayton Income fund provides 5.4 per cent. Similarly, Ebor Commodity gives 4.5 per cent., but Ebor High Return offers 5.5 per cent.

The exception in the list is Jascot Commodity, which yields 6.4 per cent. But, unlike most fund managers in this category, Fred Lawson of Jascot aims unashamedly for high income even though he admits there could be some compromise in quality of stocks selected. His defence, he adds, is in the protection afforded in a spread portfolio of 60-odd stocks.

As for the portfolios, the general theme is high exposure to rubber companies which have been special situations and offered exceptional growth through re-rating. Many of the rubber companies in the Far East have valuable land holdings which are being disposed of at premium rates for development. Acreage, meanwhile, is being replaced with less expensive but equally viable land.

Many of these companies in Malaysia have also gained status from accelerating economic expansion in the country where Gross National Product is growing at around 10 per cent. in real terms.

Of course, the strong recovery in the price of rubber—which has risen from around 12p a kilo to 34p a kilo over the past 12 months—is the main factor behind the strength of the rubber shares.

The other main categories of shares for commodity funds include tea shares, tin and overseas trading concerns (whose profit margins have not been subject to Phase Two regulations to the same extent as U.K. companies trading on the domestic market). Mining and metal shares, too, have a large exposure in most portfolios and the latest vogue is oil stocks. The cyclical nature of the shares is reflected in the recent performance of Jessel's Gold and General Trust which has declined by 11.3 per cent. in 1973 (ranking it 27 in the G. S. Herbert percentile table) after a 77.3 per cent. appreciation last year that put it at the top of the tables. Before that, in 1971, this fund was ranked 98.

Having had strong rises over the past two years, and taking into account a possible levelling off in world industrial activity, it may perhaps be prudent for unitholders to take profits in commodity trusts and invest elsewhere, for the moment at least.

CONTINUED FROM PREVIOUS PAGE

Price rises

slackens. However a new firming influence for natural rubber is that the world "energy" shortage, has already started to affect production—or at least plans for expansion—of synthetic rubber, which is basically a by-product of petroleum.

The rising price of oil, and other costs, has meant another increase this month in the price of U.K. synthetic rubber and generally it is expected that competition from its synthetic rival will be much less pressing on natural rubber than in the past two decades.

After a spectacular rise in wool, with the price of wooltops going up by as much as 400 per cent. in the space of a year, the market has now settled down at rather lower levels than the peak reached earlier this year. Wool production is far from buoyant, with Australian farmers being attracted by the higher returns available from wheat and beef.

But the very high price levels inevitably raised the bogey of competition from synthetic fibres and consumers appear to be well stocked with wool at present. Certainly the Japanese are not the eager buyers they were, when currency hedging encouraged a general rush by the Japanese into raw materials.

Supply shortages and higher prices are blunting competition from synthetic fibres, and as a "natural" fibre wool is retaining a good deal of consumer loyalty in countries like the U.S. and Japan, where the public is very environment conscious and favours natural products as a result. The signs are, therefore, that although the high prices brought a general move away from wool, the impact has been far less than in the past and supplies are still far from plentiful.

هكذا من الأصل

WEEK'S FINANCIAL DIARY

...e following is a record of the principal business and financial ...ments during the week. The Board meetings are mainly ...e purpose of considering dividends and official indications ...t available whether dividends concerned are interims or ... The sub-division shown below is based mainly on last ...time-table.

TO-DAY

...ANY MEETINGS—

..., J.J. Hayes, Middlesex, 12.30.

...Deva, Connaught Rooms, W.C.

... Elec., Grt. Western Royal ... W., 3.30.

... Stores, Manchester, 3.30

...D MEETINGS—

...en.) Construction

... General

...extile

... Fisher

Gresham Investment Trust, Barrington House, E.C., 12

Helical Bar, 20, Aldermanbury, E.C. 12.30

Houchin, Ashford, 10

Melody Mills, Leicester, 12

Metropole Industries, 20, Aldermanbury, E.C., 12

Scottish English and European Textiles, Edinburgh, 12

Town and City Properties, Dorchester Hotel, W., 12

BOARD MEETINGS—

Finals:

Silverthorne

Wankie Colliery

[illegible]

INTERIM STATEMENT

Hall Engineering (Holdings) Limited

Interim Dividend on Ordinary Shares

The unaudited results of the Group for the six months ended 30th June, 1973 are as follows:

	First half 1973 £000's	First half 1972 £000's	Second half 1972 £000's
Group turnover	17,570	11,684	12,716
Group profit before taxation	1,530	980	1,198
Taxation	690	400	507
Half-yearly dividend on Preference Shares	32 (net)	46 (gross)	46 (gross)
Profit available for Ordinary Shareholders	808	534	645
Earnings per Ordinary Share on a nil distribution basis	9.8p	6.1p	7.6p
Earnings per Ordinary Share on a fully diluted basis	8.9p	6.1p	7.6p
Dividends per Ordinary Share	2.310p (3.300p gross)	3.000p (gross)	3.825p (gross)

The Directors have declared an interim dividend of 2.310p per Ordinary Share which will be paid without deduction of income tax on 9th November, 1973 to shareholders on the Register at the close of business on 5th October, 1973.

In declaring this increased dividend the Directors have taken into account the restrictions imposed by the Government's present Counter Inflation Policy.

The record level of trading activity is continuing into the second half of the year, the results of which are confidently expected to show further improvement in profitability.

ABERCOM INVESTMENTS LIMITED

CHAIRMAN'S STATEMENT

RESULTS

...he results for the year to 30th June 1973 have again ...n all previous records. It is particularly pleasing that ...% increase in pretax profits has been achieved in a year ...g which there have been no acquisitions and therefore ...t has been consequent upon improvements in the under... companies themselves.

BLACK AND COLOURED WAGES

...n my interim statement issued in February 1973, I set ...early the Abercom policy on Black and Coloured wages ...uth Africa. To reiterate in brief, our aim is to improve ... in a continuous and productive manner and we have ...rselves the task of increasing them at a rate of at least ...es the rate of increase in the Consumer Price Index. I ...roud to be able to report that our progress has been ... rapid than the target we had set.

	Consumer Price Index April '70 =100	Abercom Average Weekly Wage (Black) June '72 =100
1972	112.2	100
...nber 1972	117.4	114.5
1973	123.4	142.0
...crease over 12 months	10%	42%

...ased attention is being given to the question of fringe ...its and social security aspects in the employment of ... and Coloured workers.

...HARE-DEALING AND INVESTMENT ACTIVITY

...he Group has continued to expand its holdings in ...d shares, particularly those listed on the Johannesburg ... Exchange. At this stage, the total portfolio exceeds ...illion in value and stands at a premium over its ... Profits realised during the year amounted to approxi...y R½ million and there was a considerable growth in ...end income. Over a period of twelve months, a holding ...een built up in the gold share market, which accounts ...out 25% of the portfolio value.

PROPOSED MARLEY ACQUISITION

...uring July 1973, announcements were made concerning ...roposed acquisitions by Abercom of the business of ...y (SA) and by Rho-Abercom of the business of Marley ...desia).

... transactions, involving a total of some R11 million, ... negotiated as a "package" and were subject to the ...val of the various shareholders and also the authorities ...ed. Consent to the acquisitions was obtained from all ... authorities excepting the Bank of England, which ...d to approve the Rho-Abercom-Marley Rhodesia agree... As a consequence, and with regret, the entire proposal ...ere and in Rhodesia has been allowed to lapse and an ...ncement to this effect was released on 31st August

PROSPECTS FOR THE YEAR AHEAD

...t looks as though 1974 is going to be a year of labour ...aterial shortages in almost all aspects of the industrial ... in South Africa.

...er books are growing longer but I expect that it will ...fficult to translate all of this extra demand into actual ... For Abercom as a whole, I feel confident that we will ...le to increase our earnings by a further 25% this year. ...ividend distribution may be increased by more than ...s the percentage of franked income in the total earnings ...e greater.

MURRAY McLEAN

...s of the above Statement, and of the annual report for ...ar ended 30th June 1973, can be obtained from Oakfield ...trars, Oakfield House, Perrymount Road, Haywards ..., Sussex RH16 3BY.

National Savings

[illegible]

BOWATER

THE BOWATER CORPORATION LIMITED

'Interim Results Fulfil Forecast...'

Lord Erroll of Hale

"The results for the first six months of 1973 are a practical demonstration of the strength of the enlarged Bowater Organisation and fulfil the forecast I made in my Annual Statement that 1973 would signal the commencement of a period of broadly based and sustained growth of your company."

"The report covers the first completed half-year of The Bowater Corporation Limited since the merger in late 1972 with Ralli International Limited. I am pleased to be able to record a profit before taxation of £20·1 million, which represents an improvement of 91% over the combined results of the two companies for the first half of last year. For convenience of comparison, this report reproduces the corresponding interim results of The Bowater Corporation Limited and of Ralli International Limited as separately published for the six months to 30th June 1972. Earnings attributable to ordinary shareholders for the half-year are equivalent to 7·5p per share compared with 10·1p per share for the whole of 1972. This improvement has been broadly based and all four divisions of the Organisation have contributed to the increase."

Year to 31.12.72 Group £m		Six months to 30th June 1973 Group £m	1972 Bowater £m	1972 Ralli £m
26·5	Group profit before taxation	20·1	6·9	3·6
12·6	Taxation	9·8	3·7	1·3
13·9	Profit after taxation	10·3	3·2	2·3
3·7	Minority interests	2·3	1·0	·5
10·2	Profit attributable to members of the Corporation	8·0	2·2	1·8
·4	Preference dividend	·2	·2	–
9·8	Profit attributable to ordinary shareholders	7·8	2·0	1·8
10·1p	Earnings per ordinary share	7·5p		

Dividend

The Board has decided to pay an interim dividend of 2·1p per £1 ordinary share, absorbing £2·2m (which, with the associated tax credit, is equivalent to 3p per share under the former system of taxation) and this will be paid on 7th November 1973 to shareholders of record on 1st October 1973.

Copies of the Interim Report can be obtained from the Secretary, The Bowater Corporation Limited, Bowater House, Knightsbridge, London SW1X 7LR

TOTAL
Compagnie Française des Pétroles

Société Anonyme

(Incorporated in France with limited liability and registered in Paris, No. [illegible])

SHARE CAPITAL

Issued and fully paid	F.
100,745 "A" shares of F.50 each	5,037,250
21,273,059 "B" shares of F.50 each	1,063,652,950
	1,068,690,200

By a resolution of the shareholders passed on 23rd June, 1972, the Board was authorised to increase the issued share capital to F.2,000,000,000, such authority expiring five years from the date of the resolution. The designation of any shares issued pursuant to this resolution as "A" or "B" shares is subject to the provisions of the agreement with the French State referred to above and the Statutes of C.F.P.

INDEBTEDNESS

At 30th June, 1973, the TOTAL Group had outstanding long-term loan capital of F.4,220,806,000 (of which F.1,430,455,000 was secured), short term loans amounting to F.1,983,712,000, bills payable amounting to F.117,702,000, bills discounted amounting to F.176,652,000, bank overdrafts of F.501,507,000, hire purchase commitments amounting to F.21,152,000 and contingent liabilities amounting to F.1,454,360,000. Since 30th June, 1973, there has been no material change in the indebtedness of the TOTAL Group except that it has arranged additional borrowings amounting to F.145,200,000. Save as herein mentioned and except for guarantees given in the ordinary course of business and disregarding intra-group indebtedness the TOTAL Group did not have outstanding at that date any bank overdrafts or other similar indebtedness, liabilities under acceptances (other than normal trade bills) or acceptance credits, mortgages, charges, leasing or hire purchase commitments, guarantees or other material contingent liabilities.

DIRECTORS

Conseil d'Administration

*Victor de METZ *(Président d'Honneur)*, 45, avenue Victor-Hugo, 75016 Paris
*René GRANIER de LILLIAC *(Président-Directeur Général)*
71, rue Perronet, 92200 Neuilly-sur-Seine
*Etienne DALEMONT *(Directeur de la Compagnie)*
9, Square du Roule, 92200 Neuilly-sur-Seine
Richard BAUMGARTNER *(Président du Groupement Atomique Alsacienne/Atlantique)*
1, rue de Marnes, 92410 Ville d'Avray
Wilfrid BAUMGARTNER *(President d'Honneur de Rhône-Poulenc, S.A.)*
96, rue de Grenelle, 75007 Paris
Stéphane DESMARAIS *(Président-Directeur Général de Sodechimie S.A.)*
2, rue Georges Leygues, 75016 Paris
*Jacques de FOUCHIER *(Président-Directeur Général de la Banque de Paris et des Pays-Bas)*
226, rue de Rivoli, 75001 Paris
Jacques GEORGES-PICOT *(Président d'Honneur de la Compagnie Financière de Suez)*
2, Square Mignot, 75016 Paris
Pierre GUILLAUMAT *(Président de l'Entreprise de Recherches et d'Activités Pétrolières, Président de la Société Nationale des Pétroles d'Aquitaine)*
15, Boulevard Richard Wallace, 92200 Neuilly-sur-Seine
*Emmanuel LAMY *(Président-Directeur Général de la Banque de l'Union Parisienne)*
28, Boulevard de la Saussaye, 92200 Neuilly-sur-Seine
André PILLIARD *(Président-Directeur Générale de la Compagnie Auxiliaire de Navigation)*
8, rue de l'Alboni, 75016 Paris
Jean REYRE *(Administrateur de la Banque de Paris et des Pays-Bas)*
96, avenue de Suffren, 75007 Paris

COMMISSAIRES DU GOUVERNEMENT

*Daniel DOMMEL *(Inspecteur Général des Finances)*
Ministère de l'Economie et des Finances 93, rue de Rivoli, 75001 Paris

*Michel VAILLAUD *(Directeur des Carburants)*
Ministère du Développement Industriel et Scientifique, 3-5, rue Barbet de Jouy, 75007 Paris

MANAGEMENT

Direction Générale

*René GRANIER de LILLIAC *(Président-Directeur Général)*
*Etienne DALEMONT *(Directeur de la Compagnie)*
*Jacques BENEZIT *(Directeur de la Compagnie)*
*Frédéric BERBIGIER *(Directeur de la Compagnie)*
Vincent LABOURET *(Secrétaire Général de la Compagnie)*

Directions

Luc BERGEAUD *(Group Personnel and Administration)*
Jean DUROC-DANNER *(Middle East)*
Philippe FERNET *(Supply, Sales and Shipping)*
Joseph-Camille GENTON *(Group Finance)*
Pierre GERMES *(Exploration and Production)*
Raymond LABBE *(Refining and Distribution outside France)*

**Member of the Advisory Committee.* *All the above are French citizens.*

Bankers to the Introduction
MORGAN GRENFELL & CO. LIMITED, 23, Great Winchester Street, London EC2P 2AX and BANQUE DE SUEZ (U.K.) LIMITED, 54, New Broad Street, London EC2M 1JL

Registered and Head Office of the Company:
5, rue Michel-Ange, 75781 Paris-Cedex 16

Stockbrokers in the United Kingdom:
CAZENOVE & CO., 12, Tokenhouse Yard, London EC2R 7AN and The Stock Exchange

Stockbrokers in Paris:
RONDELEUX, OUDART ET CIE, 20, rue Drouot, 75009 Paris

Solicitors in the United Kingdom:
DENTON, HALL & BURGIN, 3, Grays Inn Place, London WC1R 5EA

Commissaires aux Comptes:
FERDINAND ANGLEYS *(Expert Comptable)*, 42, rue du Louvre, 75001 Paris
MARCEL NEVEUX *(Expert Financier)*, 96, rue de Lille, 75007 Paris
(Until his death on 22nd July, 1973)

Commissaire aux Comptes Suppléant:
JACQUES FRINAULT *(Expert Comptable)*, 20, avenue Jules Janin, 75016 Paris

Joint Reporting Accountants:
FERDINAND ANGLEYS *(Expert Comptable, member of the Compagnie Régionale des Commissaires aux Comptes de Paris, partner in Angleys, Blind et Cie, and Auditor authorised by the Department of Trade and Industry under s.161, Companies Act 1948)*
HESKETH HARDY HIRSHFIELD & CO., *(Chartered Accountants)*,
Norwich House, 13, Southampton Place, London WC1A 2AR

Transfer Office:
BANQUE DE PARIS ET DES PAYS-BAS, 3, rue d'Antin, 75002 Paris

HISTORY AND BUSINESS

COMPAGNIE FRANCAISE DES PÉTROLES ("C.F.P.") was founded on the initiative of the French Government in March 1924 by a syndicate of industrialists and financiers as an oil exploration and production company. In May 1924 it entered into an agreement with the French State ("the 1924 Convention") under which it was authorised in accordance with Article 7 of the San Remo Agreement of 24th April, 1920 to acquire the former German shares which constituted the French State's interest in the capital of Iraq Petroleum Company Limited ("IPC") then called Turkish Petroleum Co. Limited.

IPC made its first oil strike in August 1927 at Baba Gurgur near Kirkuk and in 1928 an agreement was concluded between the shareholders of IPC under which C.F.P. was granted (*inter alia*) a right to cost oil (see paragraph 14 (viii) of "General Information" below) pro rata to its 23.75 per cent. shareholding in IPC.

In 1930 C.F.P. entered into a second agreement with the French State ("the 1930 Convention") under which, in addition to a profit sharing scheme between C.F.P. and the French State set out in the 1924 Convention in respect of the IPC investment, the State took up a 25 per cent. equity interest (later increased to its present 35 per cent. interest) in C.F.P. Subject to the terms of the above Conventions and the Statutes (further information in respect of which appears in "General Information") C.F.P. is entirely independent of government control and is run in accordance with the laws and regulations generally applicable to commercial companies.

The TOTAL Group

Since the first production in Iraq, C.F.P. has consolidated its position as a producer and has developed new activities and now ranks amongst the major international oil groups, being in eighth position in the Western world in production, and in ninth position in refining and marketing. It has become involved in all sectors of the petroleum industry and is now the holding company of a fully integrated multinational group generally known as "TOTAL", a brand name introduced in 1954.

The TOTAL Group comprises close to 200 companies employing over 25,000 people throughout the world. In 1972 its consolidated sales (excluding duties and taxes) exceeded F.14,000 million, largely representing the products of 70 million tonnes of crude oil production of which 62 million tonnes were produced by the TOTAL Group itself.

The TOTAL Group's refining and marketing operations in France are carried out by a 54.71 per cent. owned subsidiary of C.F.P., Compagnie Française de Raffinage ("CFR") which was formed in 1929 to construct and operate two refineries in France, and whose shares are listed on the Paris Stock Exchange.

1. Exploration

The TOTAL Group's exploration programme is carried out by subsidiaries or associated companies, either alone or in conjunction with others. This exploration programme has resulted in commercial discoveries in the North Sea, Tunisia, Indonesia, Canada and the U.S.A.

At the end of 1972 the gross area covered by exploration licences in which C.F.P. participated was almost 1,200,000 square kilometres widely spread throughout the world (including Western Europe (mainly in the North Sea), Africa the Middle East, the Far East (mainly in Indonesia), South America, the U.S.A., and Canada) of which 31 per cent. is in marine blocks. The corresponding net interest of the TOTAL Group amounted to 336.385 square kilometres. TOTAL Group companies acted as operators on 391,000 square kilometres.

In the offshore waters of Norway, The Netherlands and the United Kingdom the TOTAL Group participates to the extent of approximately 30 per cent. with ELF/Enterprise de Recherches et d'Activitiés Pétrolières ("ELF/ERAP"), which is owned by the French State, and Société Nationale des Pétroles d'Aquitaine ("Aquitaine"), a publicly quoted company which is 52.7 per cent. owned by ELF/ERAP, in a group known as the "French Group". In the United Kingdom waters a TOTAL Group company, TOTAL Oil Marine Limited, is the operator.

C.F.P. is also a shareholder in a number of oil companies which carry out continuing exploration work in the Middle East. During the past ten years the Iranian Oil Consortium, in which the TOTAL Group holds a 6 per cent. interest, has made productive strikes in Kharg Island and in Luristan, and Abu Dhabi Petroleum Company Limited, in which it has a 23.75 per cent. interest, discovered the Bu-Hasa field in the Emirate of Abu Dhabi.

Offshore, the TOTAL Group owns one third of Abu Dhabi Marine Areas Limited which recorded a large increase in its potential reserves on the discovery of Zakum field in 1963 and owns 50 per cent. of Dubai Marine Areas Limited which has a 50 per cent. interest in the Fateh field, discovered in 1966.

2. Production

Oil

The following is a geographical analysis of the TOTAL Group's oil production in 1972:—

	%
Middle East	88.4
North Africa	11.5
North Sea and other areas	0.1
	100.0

Whereas between 1960 and 1970 world production doubled, that of the TOTAL Group trebled. As a result of the problems arising from the partial nationalisation in Iraq the TOTAL Group's increase of crude oil output in 1972 over 1971 was restricted to approximately 2 per cent. In 1973 the corresponding increase in crude oil is expected to be of the order of 7 per cent. Thereafter production should continue to increase due to further development of existing fields.

The TOTAL Group's oil reserves are contained in some 40 fields, mostly in the Middle East but also in North Africa (Algeria and Tunisia) and Canada. It also has a 4 per cent. interest in the Ekofisk field in the North Sea.

Natural Gas

In 1972 the TOTAL Group's production of natural gas came from Australia (70.3 per cent.), Canada (8.2 per cent.) and The Netherlands (21.5 per cent.).

In The Netherlands the TOTAL Group has a 30 per cent. share in the Leeuwarden gas field, from which deliveries to Gaz de France began in October 1970 and reached 61 million cubic metres in that year, 270 million cubic metres in 1971, and 368 million cubic metres in 1972. Also in The Netherlands the TOTAL Group has a 22 per cent. interest in the Zuidwal field, which is scheduled to come into production in 1975 and from which deliveries are expected to be substantial.

The TOTAL Group is also active in the North Sea and the Middle East which have both proved to be large sources of natural gas and has, on average, an interest of approximately 25 per cent. in the Frigg gas field, which is about 200 kilometres east of the Shetlands and is partly in British and partly in Norwegian waters. Subject to final ratification, arrangements have been made for the sale of the entire production of this field to the British Gas Corporation. Present indications are that this field may prove to be among the largest in Western Europe.

In Abu Dhabi the TOTAL Group and others have entered into a twenty year contract with Japanese interests for the production and sale of liquefied natural gas and deliveries to Japan are expected to begin in 1976 at an annual rate of 3 million tonnes.

Development Expenditure

Exploration and development costs for oil and natural gas currently account for over a quarter of the TOTAL Group's annual capital expenditure, and in 1973 are estimated to amount to approximately F.700 million.

3. Transportation

The TOTAL Group, apart from using pipelines when geographical or economic conditions require it, has built and operates a tanker fleet, which satisfies most of its marine transport requirements.

In June, 1973 the TOTAL Group's fleet had an aggregate deadweight tonnage of approximately 2,623,000 tons. This tonnage includes the ships of the Compagnie Navale des Pétroles ("CNP"), a subsidiary of C.F.P. founded in 1931, and those of the Compagnie Auxiliare de Navigation ("CAN"), a publicly quoted company, which is 24 per cent. owned by the TOTAL Group and whose vessels are chartered on a long term basis to the TOTAL Group.

CNP owns and operates 14 ships, with a total deadweight tonnage of approximately 1,940,000 tons, including five supertankers, the most recent of which, "Turquoise" (280,000 tons) and "Saphir" (280,000 tons), came into commission in 1973. By mid-1975 CNP and CAN each expect to take delivery of two further supertankers, bringing the total deadweight tonnage of the TOTAL Group's fleet to approximately 3,670,000 tons. These vessels incorporate the latest technological advances in order to optimise economic operation and to improve the crews' working conditions.

4. Refining

The TOTAL Group's refinery potential has been increased in line with its crude oil resources. At present the TOTAL Group has an overall annual refining capacity of almost 57 million tonnes at 25 refineries, some controlled by subsidiaries, others by companies of which the TOTAL Group is a shareholder with processing rights. Twelve of these refineries are situated in Europe, eight in Africa, two in the Middle East, one in Australia, one in the U.S.A. and one in the French Antilles.

A refinery with an annual capacity of 6.5 million tonnes, which is expected to be completed in 1974 is under construction at Flushing in The Netherlands. The TOTAL Group also has plans for increasing the capacity of certain of its refineries in Italy and Africa and for the construction of two new units in France, the first of which, situated near Dunkirk, will have an annual capacity of 6 million tonnes when completed in 1974.

The TOTAL Group's refineries in France process approximately two thirds of the tonnage of crude oil refined by the TOTAL Group. The first two refineries built by CFR, "Normandie" at Gonfreville, near Le Havre and "Provence" at La Mède, near Marseilles, have been progressively developed. The annual capacity of "Provence" is now 10.2 million tonnes, and, following the completion in 1972 of a new topping unit increasing its annual capacity by 9 million tonnes, that of "Normandie" is now 23.3 million tonnes, making it the second largest in the Western world. This refinery is the largest lubricant producing unit in France with an annual capacity of 400,000 tonnes and is also one of the largest producers of paraffins in Europe.

The TOTAL Group now has at its disposal refining capacity in most West European countries. In Italy it controls two refineries, one at Trieste with an annual capacity of 2.3 million tonnes (on which work is in progress to raise the annual capacity to 5 million tonnes), the other at Mantua with an annual capacity of 2.4 million tonnes. It also has interests in the refineries at Rome and at Villasanta, near Milan.

In Great Britain, the TOTAL Group, in equal shares with Petrofina, owns the Killingholme refinery on the Humber estuary near Immingham. This refinery has an annual capacity of 8 million tonnes.

5. Petrochemicals

The majority of the TOTAL Group's petrochemical interests are held through a subsidiary, TOTAL Chimie, which was formed in 1968.

On the site of the refinery "Normandie" at Gonfreville TOTAL Chimie owns, in equal shares with the ELF/ERAP-Aquitaine Group, a steam cracking plant with an annual production capacity of 320,000 tonnes of ethylene and a styrene plant with an annual capacity of 200,000 tonnes. TOTAL Chimie also owns, on the same site, an aromatic hydrocarbon plant with an annual capacity of 150,000 tonnes.

TOTAL Chimie and the ELF/ERAP-Aquitaine Group each own 50 per cent. of ATO Chimie, which operates its shareholders' intermediate products and plastics production plants, markets the products of these plants and promotes the use of plastics. Aquitaine TOTAL Emballage (ATO Emballage), owned by the same shareholders as ATO Chimie, promotes the use of plastics in the packaging and building industries.

The TOTAL Group also has a 33.5 per cent. interest in Compagnie Française de l'Azote, which is a subsidiary of Pierrefitte-Auby, a publicly quoted chemical company, and which is one of the most important manufacturers of fertilizers in France.

6. Marketing

In 1954, the TOTAL Group started marketing on an international scale under the TOTAL brand name, which has since become known in some fifty countries on five continents, especially Europe and Africa.

More than a quarter of the French market for motor fuels is supplied by a subsidiary of CFR, TOTAL Compagnie Française de Distribution, through commercial distributors and some 12,000 filling stations. Distribution of heating oil is undertaken by the TOTAL network and through wholesalers. The market for liquefied petroleum gases is handled by a subsidiary, TOTALGAZ Compagnie Française des Gaz Liquéfiés.

In Italy, the subsidiary TOTAL Societa Italiana per Azioni (TOTAL S.I.p.A.) controls more than 3,000 filling stations and supplies 7 per cent. of the Italian market. In Great Britain, TOTAL Oil Great Britain Limited is expanding rapidly and now has 4 per cent. of the market in Northern England, the Midlands and Central Southern England. There are also a large number of TOTAL outlets in the Benelux countries, Western Germany, Switzerland and Austria.

In Africa, the network covers most countries, often with more than 10 per cent. of the market. The TOTAL network extends to Australia, the French Pacific Islands and the United States, where, in 1966, TOTAL became associated with a marketing company located in Michigan. In 1972, TOTAL Petroleum (North America) Ltd. sold more than 1.8 million tonnes of petroleum products.

The following is a geographical analysis of the TOTAL Group's sales in 1972:—

	%
France	50.7
Rest of Europe	26.5
Africa	9.1
Asia and Oceania	9.5
North America	4.2
	100.0

The TOTAL Group's sales of products in countries outside France have grown on average by 10.5 per cent. per annum between 1965 and 1972. Customers requiring particular services such as shipping companies and airlines are dealt with by specialized companies. For example, Air TOTAL International provides supply and fuelling services and TOTAL aviation gasoline and jet fuels are delivered on some 100 airports in 38 countries. S.A. des Pétroles Mory, 50 per cent. owned by C.F.P., delivers fuel for ships to some 100 ports around the world.

7. Nuclear Energy

In 1972 the TOTAL Group started to diversify its activities towards nuclear energy with an initial objective of developing its own uranium resources. In addition TOTAL Compagnie Minière et Nucléaire S.A. has recently signed an agreement with Rössing Uranium Limited (see Material Contract III 2) to ensure supplies of uranium concentrates throughout the 1980's.

In Australia prospecting is currently being carried out in conjunction with Ur[illegible] Corporation and with the Pechiney-Ugine Kuhlmann group, while prospecting rights h[illegible] been acquired in Mauritania and, in conjunction with others, in South West Africa and Te[illegible] U.S.A.

8. Technology and Industrial Research

The TOTAL Group's programme of development of new commercial products and research i[illegible] and perfection of new processes is carried out at the Gonfreville Research Centre which is ma[illegible] concerned with refining and petrochemicals and basic research. The Centre is, in particular, engage[illegible] research into the problem of pollution and, for instance, methods of reducing the lead content of m[illegible] fuel and desulphurisation of residues and gas oils are being studied.

The TOTAL Group is also very active in technological and industrial research and maintains cl[illegible] contact with the research departments of its suppliers of equipment and services while CNP work[illegible] close co-operation with the shipyards for the planning of additions to the TOTAL Group's flee[illegible] tankers and for the construction of exploration vessels, such as the drillship "Pelican", one of the f[illegible] of its type, in which the TOTAL Group has a substantial interest. Similarly, improvements in equipm[illegible] for exploration, for oil fields, for pipelines and for secondary product recovery plants are freque[illegible] made as a direct result of the TOTAL Group's research programme.

At the end of 1972, the TOTAL Group had some 1,000 patents, some of which are used by th[illegible] parties, notably the Merox process for "sweetening" gasolines now in use in some 1,000 pla[illegible] throughout the world.

MANAGEMENT AND STAFF

M. René Granier de Lilliac (aged 53) has been associated with the TOTAL Group since 19[illegible] Président-Directeur Général since 1971 and a member of the Board since 1968. He was previou[illegible] Président-Directeur Général of CFR and is assisted by four managers:—

M. Etienne Dalemont (aged 63), associated with the TOTAL Group since 1947, Directeur de [illegible] Compagnie and member of the Board since 1st January, 1973, who is responsible for all the operatio[illegible] departments in the fields of exploration, production and transport throughout the world and for sa[illegible] refining and marketing outside France;

M. Jacques Bénézit (aged 59), Directeur de la Compagnie who is responsible for econo[illegible] studies and long range planning. He has been associated with the TOTAL Group since 1946;

M. Frédéric Berbigier (aged 61), Directeur de la Compagnie, who has been given special appoi[illegible] ments, mostly in negotiations at high level in France and outside France. He has been associated w[illegible] the TOTAL Group since 1953;

M. Vincent Labouret (aged 51), Secrétaire Général de la Compagnie, who is secretary to the Bo[illegible] and responsible for relations with the Civil Service and the public. He has been associated with [illegible] TOTAL Group since 1963.

At the end of 1972 C.F.P. and its subsidiaries had approximately 25,000 employees, with whom [illegible] enjoys good relations. Profit sharing plans were made compulsory in France in 1967 for compan[illegible] with more than 100 employees. Amounts distributed to employees are considered as a "share in [illegible] benefits of growth" and are not taxable in the hands of the employees, while, subject to cert[illegible] conditions, the company receives a tax relief equal in value to the full amount it distributes. C.F.P. a[illegible] its French subsidiary and associated companies set up profit sharing agreements either according [illegible] legal obligations or, when legal requirements do not apply, by special arrangements agreed upon by [illegible] French Authorities.

RELATIONSHIPS WITH OIL PRODUCING COUNTRIES

Participation of oil producing countries in production requested by OPEC was the subject [illegible] negotiations throughout 1972 which ended in December with an Agreement in principle applicable [illegible] the Gulf countries except Iran. At 1st January, 1973 these countries obtained a 25 per cent. interest [illegible] be increased by 5 per cent. every year from 1978 to 1981 and by 6 per cent. in 1982 so as to rea[illegible] 51 per cent. During that time their share in the required costs and investments will be pro-ra[illegible] accordingly. The value of retroceded rights is determined in line with the companies' revalued bala[illegible] sheets.

The Participation Agreement has been approved by each of the Gulf States except Kuwait wh[illegible] ratification has been withheld by the Kuwait Parliament.

In Iran, talks between the Shah and the Iranian Oil Consortium representatives have led to [illegible] agreement which has now been ratified by the Iranian Parliament under which Iran is given con[illegible] of all producing assets in return for a long term agreement with the members of the Consortium [illegible] acquire oil at favourable prices.

In Iraq all outstanding disputes between Iraq and IPC and its associated companies have be[illegible] settled on mutually agreed terms.

Relationships with oil producing countries are constantly under review and meetings of OPEC [illegible] currently being held.

CURRENT TRADING

The following is a translation of the text of an announcement made on 8th September, 1973 [illegible]

"The results of Compagnie Française des Pétroles (the Holding Company) for the first half of 19[illegible] are as follows:—

Turnover for the first six months has become F.2,133 million compared with F.2,064 million [illegible] the first half of 1972 showing an increase of 3.3 per cent. For the same period, tonnage marketed [illegible] increased from 32.16 million to 35.25 million tonnes.

The provisional balance sheet for the 30th June includes the revaluation of all the long term ite[illegible] affected by monetary fluctuations. This operation, which reflects the exact position arising from [illegible] exchange rates which were in force at that date, shows a book loss which results from the lowering [illegible] certain currency exchange rates (mainly the dollar, pound sterling and Italian lira) in comparison w[illegible] the French franc, partly offset by the increases in other currencies.

This book loss has been charged, to a great extent, against a provision for currency losses wh[illegible] was created with the French franc's 1969 devaluation, and had, by the application of the same ru[illegible] brought about a book profit. This provision of 190 million francs has been retained in the balance sh[illegible] at 31st December, 1972. The balance of this exchange loss (as at 30th June, 1973) of F.49.5 milli[illegible] has been charged before arriving at the profits for the first half year. It should be noted that the accou[illegible] ing effects of the exchange rate fluctuations at 30th June, 1973 have been partly offset since that d[illegible] by the increase in the dollar and pound sterling exchange rates.

Taking account of this situation, provisional profit for the period amounts to 252 million fra[illegible] compared with 228 million francs for the first half of the preceding year, an increase of 10.5 per cent."

It would be unwise to forecast results of the TOTAL Group for 1973. However in the light [illegible] results to date the Board feels that, in the absence of unforeseen circumstances, it should be able [illegible] report 1973 to be another satisfactory year for the TOTAL Group.

DIVIDENDS

It is the practice of C.F.P. to declare an annual dividend which is normally paid in or around Ju[illegible] and it has always followed a dividend policy which enables shareholders to benefit from the expansi[illegible] of the TOTAL Group and from increases in its profits. No change in this policy is currently contemplate[illegible]

WORKING CAPITAL

The TOTAL Group's investment programme for the next two years indicates a requirement of som[illegible] F.5,000 million, which will be financed mostly out of internally generated funds and partly by extern[illegible] financing the form of which will be determined in the light of market conditions.

Subject to the foregoing the Board of C.F.P. is of the opinion that the TOTAL Group has sufficie[illegible] working capital for its present requirements.

Compagnie Française des Pétroles

Continued

)UNTANTS' REPORT

following is a copy of a report which has been received from the joint reporting accountants.
d Angleys and Hesketh Hardy Hirshfield & Co.
ctors,
IMPAGNIE FRANÇAISE DES PÉTROLES
ORGAN GRENFELL & CO. LIMITED
NQUE DE SUEZ (U.K.) LIMITED *21st September, 1973*
n,
pagnie Française des Pétroles ("C.F.P.") has prepared since 1962 and published since 1965 consolidated ccounts for C.F.P. and its subsidiary, joint venture and associated companies ("the TOTAL Group"). oup accounts for the years ended 31st December, 1971 and 1972 were audited by the Commissaires aux (auditors) of C.F.P. but, prior to 1971, the group accounts were not subjected to external audit. We are however that for the five years for which figures are presented in this report, with a few minor exceptions. unts of every subsidiary, joint venture and associated company have been subjected either to external o examination by the group financial management.
Marcel Neveux was one of the statutory commissaires aux comptes for some twenty-five years until his death in July, 1973. and accordingly had held this office throughout the period covered by this report. een instructed with us to act as joint reporting accountant, and his work has contributed to this report.
972, M. Ferdinand Angleys was also appointed as a commissaire aux comptes of C.F.P.; he, the late ux and another of the partners in the firm of Angleys, Blind et Cie have, in addition, acted for varying of years as commissaires aux comptes of many companies in the TOTAL Group.

IT OF REVIEW

have examined the Accounts of all the individual companies in the TOTAL Group for the period from ary, 1970 to 31st December, 1972.
ough we have reviewed the Accounts of the individual companies for the years ended 31st December, d 1969, we have not carried out any detailed examination of the Consolidated Accounts for those two d are not, therefore, able to express an opinion thereon. We are however satisfied that, apart from the t of associated companies referred to in the next section of this report, the accounts of those years were on bases consistent with those of the following three years.
basis of depreciation of the tanker fleet is to adopt the maximum rate permitted by the French fiscal s and to apply it with effect from the time when the keel is laid. The rate exceeds what would normally dered acceptable in the United Kingdom for accounting purposes and is applied before the construction set is complete. Because the reducing balance method is used and new vessels have been taking the place ssels during the period under review, the net effect on profits is not material, but the net book values of rs for balance sheet purposes are understated by comparison with United Kingdom bases. Subject to this satisfied ourselves that the provisions for depreciation and amortisation charged in arriving at the reported e reasonable. Subject to the foregoing in our opinion the statements of turnover and profits for the years 1st December, 1970, 1971 and 1972 and the statements of net assets at those dates, as set out below, e based on the Accounts of the various companies of the TOTAL Group, present in conjunction with the his report a true and fair view of the TOTAL Group profits for those years and of the state of affairs of the Group at those dates and of C.F.P. at 31st December, 1972. No adjustments have been made to the s already published.

OF CONSOLIDATION

n cases where C.F.P. owns directly or indirectly 50 per cent. or more of the equity capital of a subsidiary, C.F.P. exercises management control although owning less than 50 per cent. of the equity capital, the s normally applied in the United Kingdom to subsidiaries have been followed, except that, in accordance nch law and practice, no distinction has been drawn between pre-acquisition and post-acquisition profits whole of the free reserves are available for distribution to shareholders. This treatment is referred to as the method. During the three years ended 31st December, 1972, no companies became subsidiaries as a acquisitions.
For a number of joint venture companies where there are shareholders' agreements and in which C.F.P. tes with one or more other companies, C.F.P.'s proportion (based on its percentage participation in the of each item of assets, liabilities, income and expenditure has been included in the consolidated accounts. tment is referred to as the "proportional" method. In one case, Raffinerie de Strasbourg, consolidation is C.F.P.'s proportion of finance provided, not equity participation, but the difference is not material.
For other companies which are material and in which C.F.P.'s equity participation, direct and indirect, is or exceeds 10 per cent., the proportions of net assets and net profits attributable to C.F.P. are included nsolidation under the references to associated companies. This is not dissimilar from the standard treatment ated companies in the United Kingdom.
The classification of associated companies was introduced with effect from 1970. Before that date all es in which the C.F.P. participation exceeded 10 per cent. and which were not treated as global were as proportional. The change in the method, if introduced in 1969, would have given a decrease of less er cent. in the net group turnover and a decrease of less than 1 per cent. in the net fixed assets, the net naining unchanged.
The numbers of companies included in each of the foregoing categories are as follows:—

	1968	1969	1970	1971	1972
nt company	1	1	1	1	1
al consolidation	103	103	101	100	100
ortional consolidation	63	74	56	53	53
ciated companies	—	—	28	38	35
	167	178	186	192	189

In some cases provisional figures were included in the published consolidated accounts. Although any s between such figures and the audited figures subsequently available have been immaterial, they have subject of an adjustment in the following year's consolidation.
A list of the principal subsidiary, joint venture and associated companies is given in the Appendix to rt.

ENTATION OF ACCOUNTING STATEMENTS

.P. intends to continue in future years the form of accounts which it has hitherto adopted, subject to the ocess of change in line with general accounting development. We have accordingly adhered to this form of s and broad classification of items in drawing up the financial statements in this report as far as possible, ate comparison with future published annual accounts.
following are the material variations from customary United Kingdom presentation:—
Amounts receivable or payable within one year of the balance sheet date are treated as current assets or ilities; this includes those instalments of long-term loans or debentures due within twelve months. versely, amounts not receivable or payable until after the expiration of twelve months are treated as -term items; those include items such as prepaid or recoverable expenses and deposits.
Adjustments of income and expenditure items of previous years are accumulated and shown as a separate in the profit and loss account under that description, whereas the more common United Kingdom practice ld be to adjust each constituent item on the income or expense account heading to which it relates ess it were so large as to warrant treatment as an extraordinary item).
The item "Exceptional profits and losses" includes items which would normally be described as aordinary; but it also includes recurring items (although possibly unusually large in amount) such as profits osses on sales of investments.
Prior year adjustments and exceptional profits and losses are both shown gross; taxation related to those s is included in the taxation charge for the year.
Group share of profits less losses of associated companies represents the share of such profits or losses r tax; the item is accordingly added to the figure of group profits after taxation.

OVER AND PROFITS

turnover and profits of the TOTAL Group based on the consolidated accounts mentioned above for the s ended 31st December, 1972, were as follows:

	Notes	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Turnover	1					
petroleum products		12,338,098	14,299,709	17,232,896	20,713,290	20,989,431*
services and other products		378,548	452,560	476,353	434,427	550,178*
		12,716,645	14,752,269	17,709,249	21,147,717	21,539,609*
ities and sales taxes	1	5,098,476	6,335,936	6,880,159	7,935,154	7,385,229*
rnover	1	7,618,169	8,416,333	10,829,090	13,212,563	14,154,380
st of crude oil, products sold rvices		4,942,846	5,277,184	7,144,596	8,281,280	9,716,178
Operating Profit		2,675,323	3,139,149	3,684,494	4,931,283	4,438,202
nancial income		113,807	167,002	212,610	214,747	207,434
ior year adjustments	2	(7,781)	22,043	(2,666)	7,219	54,408
ceptional and extraordinary profits and losses	3	70,192	99,809	98,889	(18,111)	97,780
		176,218	288,854	308,832	203,855	359,622
preciation and provisions	4	812,390	922,321	1,030,300	1,211,288	1,193,764
terest and other finance charges		164,573	235,848	380,124	457,129	480,877
		976,963	1,158,169	1,410,424	1,668,417	1,674,641
lidated Profit before Taxation		1,874,578	2,269,834	2,582,902	3,468,721	3,123,183
xation and share of the French State in Super-Profits	5	1,342,258	1,551,288	2,009,606	2,770,802	2,510,334
dated profit after taxation		532,320	718,546	573,296	695,619	612,849
s share of profit after taxation ociated companies		—	—	13,945	7,118	14,521
rofit after taxation		532,320	718,546	587,241	702,937	627,370
inority interests		90,407	105,102	98,097	145,088	49,201
after Taxation and rity Interests		441,913	613,444	489,144	557,849	578,169
ith as follows:—						
lends		104,494	125,393	125,393	161,491	170,990
ames:						
m C.F.P.		2,500	3,600	3,000	3,000	3,000
m subsidiaries		673	872	1,368	1,753	1,921
lend taxes on intra-group dividends		1,331	1,544	2,607	2,362	3,289
ined:						
C.F.P.		291,593	487,812	240,092	255,839	383,301
subsidiaries		41,322	(5,777)	116,684	133,404	15,658
		441,913	613,444	489,144	557,849	578,169

Group turnover represents the gross value of goods and services sold in the normal course of business after ting sales between companies in the TOTAL Group. A change in the normal method of recording sales e effective in France generally on 1st January, 1972. Before that date, sales were recorded at figures inclusive e added tax, the latter being deducted as a separate item. With effect from 1st January, 1972, however, the l practice is to record sales exclusive of value added tax. This applies to the parent company and to the French ies. It does not affect the figures of net turnover which are on a comparable basis from year to year.
ior year adjustments are broadly analysed as follows, expressed in millions of francs:—

	1968	1969	1970	1971	1972
ments to oil prices and other costs	(11·7)	19·2	(2·7)	(20·5)	·5·3
justments of Italian companies	3·9	2·8	—	27·7	49·1
	(7·8)	22·0	(2·7)	7·2	54·4

ceptional and extraordinary profits and losses relate mainly to gains and losses on disposals of fixed assets and ments and to differences on exchange resulting from currency adjustments and realignments. The following is d analysis expressed in millions of francs:—

	1968	1969	1970	1971	1972
cy differences	8·9	26·1	(5·9)	(64·6)	(5·3)
s less losses on disposals of fixed assets	12·9	48·2	62·1	20·7	68·0
	48·4	25·5	45·7	25·8	35·1
	70·2	99·8	98·9	(18·1)	97·8

Rates of depreciation are based on the straight line method, or the reducing balance method, or are in dance with the fiscal laws of the country concerned. It is the policy of the TOTAL Group to depreciate fixed over their estimated useful lives or shorter periods.
ploration and research costs of American subsidiaries are dealt with by the full-cost accounting method: costs are capitalised without distinguishing between proven, unproven and abandoned fields, and are then sed by reference to total proven reserves on the unit of production method.
or all other exploration subsidiaries, provision is made in full against research and exploration costs in the which they are incurred. If a discovery is subsequently made, the appropriate part of these costs is reinstated ssets and a corresponding reduction made in the depreciation charge for the year.
(a) French legislation enacted in 1965 made provision for taxation on a group basis. This treatment is not d universally but only to certain groups which request it as the TOTAL Group has done in order to obtain in Tax Relief. From 1966 onwards, therefore, such relief has been available to C.F.P. This relief is, however, ident on the furnishing of proof of payment of foreign taxes, and in some countries, particularly in the Middle tax liabilities are not determined until some considerable time after the year-end. The relief due to C.F.P. ot accordingly be computed in time for any reliable estimate to be included in the accounts of the year to it relates, and it is the practice of the company to take credit for the relief only in the year in which it is ed. This has resulted in the following amounts being credited to taxation in the consolidated accounts:—

Year	Amount of Relief Received F.'000	Years to which Relief relates
1968	—	
1969	40,306	1966
1970	616	1966
	47 517	1967
	44,450	1968
	92,583	
1971	53,500	1969
	96,372	1970
	149,872	
1972	174,311	1971

(b) Pursuant to the 1924 Convention, there is a special account between C.F.P. and the French State in respect of its holdings in Iraq Petroleum Company Limited and sister companies. The amounts provisionally calculated each year are included with the taxation charge and referred to as "Share of the French State in Super-Profits". When the liability is finally determined and paid, any adjustments are included as prior year adjustments. The relevant figures for the Share of the French State in Super-Profits are as follows:—

Year	Provisional Charge F.'000	Charges relating to prior years F.'000	Credits relating to prior years F.'000	Relevant prior years
1968	14,000	598	—	1967
1969	8,500	1,617	—	1962–1966
	—	—	5,450	1968
1970	4,700	—	1,581	1968
	—	3,100	—	1969
1971	24,000	—	170	1970
1972	25,000	—	3,716	1971

6. The figures of consolidated profit before taxation are stated after deducting auditors' remuneration which in 1972 totalled F.3,900,000. This figure represents the full amount of audit fees and expenses for the parent and subsidiary companies together with the relevant proportions of the audit fees and expenses of the joint venture companies.

7. The aggregate emoluments of the Conseil d'Administration ("the Board") and Members of the "Direction" (management) of C.F.P. receivable from C.F.P. or its subsidiaries or joint venture companies in respect of the year ended 31st December 1972, amounted to F.7,908,000. This figure includes F.3,777,000 representing tantièmes (share of profits) which are an appropriation of net profits and are accordingly not charged before arriving at the figures of profit after taxation and minority interests. Tantièmes are the statutory remuneration of the Board as laid down by the company's statutes (equivalent to the memorandum and articles of association); in the case of C.F.P. they are specified as 5 per cent. of any amount recommended for distribution in excess of the statutory first dividend of 6 per cent. For each of the years 1970, 1971 and 1972, the tantièmes receivable from the parent company have, on the proposal of the Board, been restricted to F.3,000,000.

Apart from normal salary increments, there have been no changes to the arrangements in force at 31st December, 1972.

8. The reported profits include some pre-acquisition profits of joint venture and associated companies which in the United Kingdom would not be available for distribution and would have been excluded; the amounts, however, are not material.

9. There are restrictions on the extent to which earnings in certain countries can be remitted to France, but the amounts involved are not material.

NET ASSETS — PARENT COMPANY

The net assets of the parent company at 31st December, 1972 were:—

		F.'000 Gross	F.'000 Depreciation	F.'000 Net
Fixed Assets (notes (a) and (b))				
Land		3,567	—	3,567
Buildings		26,827	13,724	13,103
Motor vehicles		2,109	977	1,132
Furniture and equipment		23,489	14 430	9,059
Assets in course of construction		1,325	—	1,325
Cost of lease		30	—	30
		57,347	29,131	28,216
Investments and Long-term Assets (notes (c), (d) and (h))				
Subsidiaries:				
Shares	1,658,375			
Long-term loans	891,397			
			2,549 772	
Joint Venture Companies:				
Shares	512,497			
Long-term loans	497,114			
			1,009,611	
Associated Companies:				
Shares	160,452			
Long-term loans	800			
			161,252	
Other Companies:				
Shares (note (e))	72,668			
Long-term loans	442,451			
			515,119	
Advances to subsidiary and associated companies for further shares, ess provisions (note (f))			122,131	
Deposits given as security			2,308	
				4,360,193
Current Assets				
Stocks (note (g))			27,709	
Trade debtors:				
Subsidiaries	601 058			
Joint Venture Companies	1,013			
Others	1,112			
			603,183	
Other debtors:				
Subsidiaries	901,161			
Joint Venture Companies	6,051			
Others	233,291			
			1,140,503	
Prepaid and recoverable expenses			20,564	
Quoted investments (note (h))			76,150	
Short-term loans:				
Subsidiaries	247,140			
Joint Venture Companies	26,510			
Others	183,002			
			456,652	
Bank balances:				
Deposit accounts	266,000			
Current accounts	17,718			
			283,718	
Deposits for payment of unclaimed dividends interest and loan repayments			17,317	
Purchases of own debentures (note (k))			9,227	
			2,636,013	
Current Liabilities				
Trade creditors:				
Subsidiaries	4,758			
Joint Venture Companies	92,706			
Others	83,521			
			180,985	
Sundry creditors, bills payable and accrued charges (note (e)):				
Subsidiaries	25,258			
Joint Venture Companies	7,761			
Others	942,377			
			975,396	
Debentures and other borrowings repayable within one year (notes (l) and (m)):				
Subsidiaries	2,000			
Joint Venture Companies	38,531			
Others	305,964			
			346,495	
Proposed dividends			170,990	
			1,673,866	
NET CURRENT ASSETS				961,147
				5,349,556
Deduct: Debentures (note (l))			577,571	
Long-term loans (note (m))			162,208	
Provisions for risks			52,000	
				791,779
				4,557,777
Add: Deferred charges—discount on debentures				27,396
PARENT COMPANY NET ASSETS				4,585,173
Representing: Issued capital				1,068,690
Share premium account				357,236
Legal reserve				106,869
Other reserves				3,052,378
				4,585,173

Notes:

(a) If a French company incorporates in its accounts any revaluation of fixed assets, the amounts added to the asset values must be dealt with as exceptional profits and are then subjected to corporation tax; it is not, therefore, the practice of C.F.P. to revalue its assets. Specific permission was given, however, in 1959 for a revaluation by reference to indices laid down by the fiscal authorities without any tax liabilities being incurred, and subsequent depreciation was based on the revalued amounts. This concession has not been repeated since 1959. The increase in asset values of the parent company resulting from that revaluation was not material; in the main the fixed assets at 31st December, 1972 are stated at cost.

(b) Maximum rates of depreciation are determined by the French fiscal authorities in accordance with the expected useful lives of the various classes of assets. Depreciation is an allowable deduction for tax purposes only to the extent that it is recorded in the accounts; conversely, any depreciation charged in the accounts in excess of the fiscal rates is disallowed for tax purposes. It is the policy of the company to apply the maximum fiscal rates. No adjustments have been made to the balance sheet figures already published.

(c) Shares and long-term loans (repayable more than one year after the date of the balance sheet) are valued at cost less amounts provided for depreciation or loss. In the case of companies engaged in exploration, 100 per cent. depreciation is provided until such time as a field is proved to be productive when the depreciation is written back. In other cases provisions are made where necessary to reduce the book value to the proportion of the capital and reserves attributable to the C.F.P. holding.

(d) Three of the subsidiaries Compagnie Française de Raffinage, Omnium Français de Pétroles, and TOTAL Petroleum (North America) Ltd. and two of the associated companies Compagnie Auxiliaire de Navigation and Socantar are themselves quoted on the Paris Stock Exchange. These investments which had a book value of F.601,625,970 at 31st December, 1972 had a market value of F.1,114,325,348. These market values are calculated in accordance with published average stock exchange prices for the month of December.

(e) The book value of shares in other companies includes F.4,768,596 representing calls not yet made on shares acquired in seven companies. This figure is also included in the item "Sundry creditors, bills payable and accrued charges" under the heading of current liabilities.

(f) Advances for the acquisition of further shares are made principally in respect of exploration companies and are free of interest. Out of a total amount of F.662,605,882 advanced at 31st December, 1972, provisions of F.540,474,900 had been made. In the event of a field proving productive, the relevant provision will be written back so that the original advance is reinstated and is then usually applied in taking up the further shares. If such shares are not taken up, the advances may be repaid out of subsequent profits but are not otherwise recoverable by C.F.P.

(g) Stocks, mainly of crude oil and petroleum products held at refineries, are valued at cost of purchase from other TOTAL Group companies (including an appropriate element of profit earned by such companies) or realisable value, whichever is the lower.

(h) Quoted investments are shown at the lower of cost or market value. At 31st December, 1972, the Paris Stock Exchange value of these holdings, calculated as in note (d) above, was F.157,377,968. Subsidiary and associated companies which are quoted are included under the heading "Investments and Long-term Assets" above.

(j) Balance sheet items expressed in foreign currencies have been converted into French francs at the market exchange rates published by the French Government as at 31st December, 1972.

(k) C.F.P.'s own debentures purchased through the stock market are available for re-sale at any time prior to final redemption. The company's present policy, however, is to cancel them as part of the next redemption.

(l) Debentures are repayable in the following years and currencies:—

		1973 F.'000	1974 F.'000	1975 F.'000	1976 F.'000	1977 F.'000	1978 onwards F.'000
French francs	5%	16,180	15,834	17,535	18,285	19,027	61,971
Netherlands florins	5%	6,343	6,343	6,343	6,343	—	—
Swiss francs	4½%	—	—	—	13,562	13,562	54,328
Swiss francs	6½%	—	—	—	—	—	108,656
Deutschmarks	8½%	—	—	—	15,989	15,989	127,912
U.S. dollars	6%	4,184	4,440	4,709	4,988	5,285	55,453
		26,687	27,317	28,594	59,167	53,863	408,320

(m) Loans are repayable in the following years and currencies:—

		1973 F.'000	1974 F.'000	1975 F.'000	1976 F.'000	1977 F.'000	1978 onwards F.'000
French francs	4¾% to 7½%	113,054	58	57	53	20	34
Pounds sterling	nil	54,457	—	—	—	—	—
Swiss francs	6½%	—	—	—	—	33,955	—
Deutschmarks	3½% to 8%	23,984	—	—	—	—	—
U.S. dollars	6% to 6½%	125,313	—	102,425	—	25,606	—
C.F.A. francs	3%	2,000	—	—	—	—	—
		318,808	58	102,482	53	59,581	34

(n) Contingent Liabilities:

	F.'000	F.'000
Bills discounted, not yet matured		Nil
Guarantees on behalf of:—		
Subsidiaries	1,011,749	
Joint Venture Companies	164,731	
Associated Companies	11,246	
Other	11,466	
		1,199,192

NET ASSETS — GROUP

The net assets of the TOTAL Group as reflected in the published balance sheets at the end of each of the last six years are summarised as follows:—

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
FIXED ASSETS	3,997,834	4,609,826	5,714,620	6,376,200	6,603,177	7,922,033
INVESTMENTS AND LONG TERM ASSETS	750,988	808,396	950,771	1,876,168	2,792,187	2,540,716
NET CURRENT ASSETS	924,011	1,213,939	1,251,816	1,360,729	1,694,546	1,471,519
	5,672,833	6,632,161	7,917,207	9,613,097	11,089,890	11,934,268
Less: LONG-TERM LIABILITIES AND PROVISIONS	1,372,345	1,900,243	2,202,296	3,395,319	4,098,576	4,599,209
	4,300,488	4,731,918	5,714,911	6,217,778	6,991,314	7,335,059
Add: DEFERRED CHARGES	73,135	98,967	122,636	139,065	113,770	128,845
	4,373,623	4,830,885	5,837,547	6,356,843	7,105,084	7,463,904
Less: INTERESTS OF OUTSIDE SHAREHOLDERS IN SUBSIDIARIES	779,498	821,482	1,055,940	1,239,257	1,275,173	1,317,933
NET ASSETS ATTRIBUTABLE TO MEMBERS OF C.F.P.	3,594,125	4,009,403	4,781,607	5,117,586	5,829,911	6,145,971
Representing:						
Issued capital	781,622	781,622	949,947	949,947	1,068,690	1,068,690
Share premium account	253,865	253,865	96,000	96,000	357,236	357,236
Legal reserve	79,162	79,162	94,995	94,995	106,869	106,869
Other reserves	2,469,476	2,884,754	3,640,665	3,976,644	4,297,116	4,613,176
	3,594,125	4,009,403	4,781,607	5,117,586	5,829,911	6,145,971

The net assets figures are given below in greater detail, with explanatory notes where required.

FIXED ASSETS

Some assets of French companies were revalued in 1959 in accordance with official indices laid down by the French Government.

Except where otherwise stated, rates of depreciation are based on the straight line method or reducing balance method or in accordance with the fiscal laws of the country concerned.

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Land, at cost	383,411	441,181	530,369	633,947	731,754	806,770
Underground works and drilling expenses:						
Cost or valuation	830,882	845,763	1,052,814	1,176,475	169,340	192,748
Depreciation	528,660	588,661	717,303	783,989	80,155	87,722
Net	302,222	257,102	335,211	392,486	89,185	105,026

The major changes between 1970 and 1971 reflect the nationalisation measures implemented by the Algerian Government.

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Buildings and ancillary facilities:						
Cost or valuation	1,182,400	1,336,916	1,567,119	1,720,400	1,679,399	1,847,896
Depreciation	444,196	501,122	601,913	694,061	663,732	717,037
Net	738,204	835,794	965,206	1,026,339	1,015,667	1,130,859
Tanker fleet:						
Cost	499,141	579,297	572,577	548,330	686,587	639,443
Depreciation	447,549	480,757	498,144	464,815	505,450	512,794
Net	51,592	98,540	74,433	83,515	181,137	126,649

Depreciation is applied at 31·25% per annum on the reducing balance (the maximum rate allowed by the French fiscal authorities) so as to write off the cost of each vessel in 8 years. At 31st December, 1972, vessels having a total cost of F.279,564,674 had been fully depreciated.

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Fixed equipment for hydrocarbon transportation:						
Cost or valuation	290,927	287,634	389,536	500,567	252,236	390,017
Depreciation	152,067	170,945	219,419	291,108	84,054	106,195
Net	138,860	116,689	170,117	209,459	168,182	283,822
Oil exploration and research work:						
Cost	805,902	973,178	1,177,585	1,234,750	1,490,191	1,651,405
Depreciation	677,722	765,886	939,848	993,240	1,114,602	1,107,557
Net	128,180	207,292	237,737	241,510	375,589	543,848

The basis of depreciation is indicated in note 4 to the statement of turnover and profits.

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Processing and storage plants:						
Cost or valuation	3,584,960	3,992,476	4,652,697	5,325,490	5,252,492	5,894,390
Depreciation	2,529,915	2,764,053	3,182,021	3,524,936	3,482,186	3,432,455
Net	1,055,045	1,228,423	1,470,676	1,800,554	1,770,306	2,461,935
Other plant and tools:						
Cost or valuation	1,602,889	1,684,380	1,978,870	1,957,892	2,055,363	2,418,987
Depreciation	1,009,128	1,026,953	1,229,964	1,203,657	1,193,254	1,392,706
Net	593,761	657,427	748,906	754,235	862,109	1,026,281
Motor vehicles:						
Cost	214,454	221,688	263,401	261,600	261,213	279,981
Depreciation	150,728	151,277	171,444	177,526	166,474	176,721
Net	63,726	70,411	91,957	84,074	94,739	103,260
Assets in course of construction:						
Tankers, at cost	59,933	44,862	110,273	146,197	90,887	285,965
Depreciation	8,410	—	15,375	13,336	—	3,533
	51,523	44,862	94,898	132,861	90,887	282,432
Other assets, at cost	265,550	370,443	625,821	646,268	816,542	706,088
	317,073	415,305	720,719	779,129	907,429	988,520

French fiscal regulations allow depreciation of ships to commence as soon as the keel has been laid.

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Oil rights, licences, patents, and related expenditure, at cost less amounts written off	225,760	281,682	369,289	370,952	407,080	365,263
Fixed asset totals:						
Gross	9,946,209	11,059,480	13,290,051	14,522,868	13,893,084	15,458,753
Depreciation	5,948,375	6,449,654	7,575,431	8,146,668	7,289,907	7,536,720
Net (as shown above)	3,997,834	4,609,826	5,714,620	6,376,200	6,603,177	7,922,033

INVESTMENTS AND LONG-TERM ASSETS

	1967	1968	1969	1970	1971	1972
Shares in associated companies:						
Cost				490,365	979,907	734,521
Less amounts provided				64,447	114,549	98,280
Net				425,938	865,358	636,241

Prior to 1970, the companies concerned were consolidated on the proportional basis.

	1967	1968	1969	1970	1971	1972
Trade investments and Subsidiaries not consolidated:						
Cost	305,600	337,033	328 782	292,430	408,847	442,009
Less amounts provided	67,667	73,368	53 572	58,011	151,256	151,339
Net	237,933	263,665	275,210	234,419	257,591	290,670

Subsidiaries are not consolidated either on a global or on a proportional basis if C.F.P.'s proportion of the net assets is less than F.500,000 or of the net sales is less than F.1,000,000.

	1967	1968	1969	1970	1971	1972
Deposits given as security	13,619	16,494	21,542	20,075	21,008	25,266
Long-term loans:						
Gross	458,261	486,183	607,428	1,133,047	1,586,474	1,579,620
Less amounts provided	20,434	22,526	25 707	25,927	32,579	177,118
Net	437,827	463,657	581,721	1,107,120	1,553,895	1,402,502

The above figures represent loans which are due for recovery more than twelve months after the balance sheet date. The proportions of such loans which are receivable within twelve months are included under the heading of current assets.

	1967	1968	1969	1970	1971	1972
Long-term recoverable and prepaid expenses	61,409	64,580	72,298	88,616	94,315	186,037

These figures also relate to periods beyond one year from the balance sheet date.

The assets in Iraq and Syria of Iraq Petroleum Company Ltd. ("I.P.C."), a "joint venture" company, were nationalised in 1972. As part of a general settlement reached with the Iraqi Government at the end of February, 1973, another joint venture company, Mosul Petroleum Company Ltd. ("M.P.C."), a sister company of I.P.C., surrendered its concession. Under the settlement, compensation was to be paid by means of delivering to the participating shareholders an agreed tonnage of free oil during the period ending in May 1974. Because this form of compensation cannot yet be readily translated into monetary terms final accounts for 1972 have not yet been issued by the companies concerned. They have accordingly been brought into the consolidation on the basis of their balance sheets at 31st December, 1971. The item "long-term recoverable and prepaid expenses" includes F.81,958,614 in respect of I.P.C. and F.13,144 893 in respect of M.P.C. representing C.F.P.'s 23.75 per cent. proportional interest in the net book value of their fixed assets which were in previous years included under the appropriate fixed asset headings. C.F.P.'s estimates indicate that the monetary value which will in due course be attributable to the free oil mentioned above will not differ materially from the book value of the assets nationalised and that accordingly no provision is required.

Compagnie Française des Pétroles

NET CURRENT ASSETS

	1967 F.'000	1968 F.'000	1969 F.'000	1970 F.'000	1971 F.'000	1972 F.'000
Current assets:						
Stocks	919,475	1,061,139	1,425,232	1,582,379	2,078,316	2,165,835
Trade debtors	1,210,522	1,071,553	1,594,882	1,936,282	2,168,786	2,472,843
Other debtors	503,103	579,697	771,578	784,422	851,778	1,260,598
Bills receivable	215,000	239,721	417,866	424,293	522,617	598,788
Recoverable and prepaid expenses	305,111	440,276	435,834	518,162	490,808	587,515
Quoted investments	360,463	371,763	289,063	233,702	373,812	505,508
Short-term loans	537,330	685,397	876,511	1,274,006	833,957	1,060,305
Bank and cash balances	485,388	645,097	737,075	628,123	1,250,223	854,789
	4,536,392	5,093,643	6,548,240	7,381,369	8,570,296	9,505,982
Current liabilities:						
Creditors and accrued charges	2,319,440	2,777,426	3,285,664	4,140,498	4,444,036	4,859,844
Bills payable	531,639	355,947	604,954	503,029	667,732	294,010
Debentures repayable within one year	28,888	38,687	41,239	33,240	31,575	38,101
Other borrowings repayable within one year	343,903	373,263	855,539	911,126	1,159,867	2,117,032
Bank overdrafts	293,516	229,887	383,635	317,364	411,049	454,380
Proposed dividends	94,895	104,494	125,393	125,393	161,491	170,990
	3,612,381	3,879,704	5,296,424	6,030,640	6,875,750	8,034,463
Net Current assets	924,011	1,213,939	1,251,816	1,350,729	1,694,546	1,471,519

Long-term liabilities and provisions

	1967	1968	1969	1970	1971	1972
Debentures	598,530	765,891	780,772	938,192	1,283,679	1,451,924
Long-term loans	556,150	923,738	1,128,269	2,082,088	2,200,124	2,529,064
Deposits received as security	42,730	40,031	58,611	78,959	143,775	165,427
Staff retirement schemes	62,919	66,443	82,504	102,066	117,579	137,875
Provisions for risks	112,016	104,140	152,140	184,014	353,418	314,919
	1,372,345	1,900,243	2,202,296	3,385,319	4,098,576	4,598,209

Deferred charges

	1967	1968	1969	1970	1971	1972
Discount on debentures	48,356	68,287	70,414	69,912	61,639	58,619
Preliminary charges	24,779	30,680	52,222	68,153	52,131	70,226
	73,135	98,967	122,636	138,065	113,770	128,840

Notes:

(1) Stocks are valued at the lower of cost and net realisable value. Cost includes appropriate proportions of overheads, including depreciation where applicable. Inter-company profits are eliminated from basic purchase prices.

(2) Trade and other debtors and bills receivable are stated after deduction of appropriate provisions for doubtful debts.

(3) Quoted investments are included at market value less 10 per cent. If the resulting figure exceeds original cost, or otherwise at cost less, where appropriate, a provision to reduce to market value. For this purpose, market value is calculated in accordance with published average stock exchange prices for the month of December. At 31st December, 1972, the market value of the quoted investments was F.512,040,937. Their original cost was F.437,563,369.

(4) Balance sheet items in the accounts of companies in the TOTAL Group expressed in foreign currencies have been converted into French francs at the exchange rates published by the French Government as at the end of each year. The fixed assets of producing companies operating in the Middle East, however, have been converted into French francs from their original United States dollar values, despite the fact that the accounts of these companies are expressed in sterling: the grounds for this treatment are that the companies operate outside the sterling area and the TOTAL Group markets its share of their output in United States dollars, and accordingly has no need to take any account of fluctuations in the value of sterling which is used solely for the purpose of preparing the published accounts of the companies concerned.

(5) Debentures outstanding at 31st December, 1972 are repayable in the following years and currencies:—

		1973 F.'000	1974 F.'000	1975 F.'000	1976 F.'000	1977 F.'000	1978 onwards F.'000
French francs	4⅝% to 8¾%	21,748	47,143	48,667	55,679	58,758	602,162
Swiss francs	4½% to 6¾%	—	—	—	17,187	12,582	230,384
Deutschmarks	6½%	—	—	—	15,989	15,969	127,912
U.S. dollars	5½% to 8%	4,184	6,127	6,394	6,675	6,972	63,872
Netherlands florins	6% to 7½%	6,343	7,124	7,124	7,124	791	58,523
Italian lire	6½%	5,826	6,203	963	—	—	—
		38,101	66,597	63,138	102,654	98,082	1,123,453

(6) Loans outstanding at 31st December, 1972 are repayable in the following years and currencies:—

		1973 F.'000	1974 F.'000	1975 F.'000	1976 F.'000	1977 F.'000	1978 onwards F.'000
French francs	6% to 10%	1,544,481	263,417	241,266	124,516	79,987	571,528
Deutschmarks	6¾% to 8¼%	96,342	24,814	10,341	18,245	8,245	18,394
U.S. dollars	5½% to 8¾%	86,613	63,672	181,476	27,168	76,816	104,793
Italian lire	3% to 9%	7,963	22,557	117,457	19,973	73,323	49,290
Pounds sterling	5½% to 11½%	188,639	14,085	36,792	36,767	15,945	20,932
Swiss francs	5¾% to 8%	61,684	3,865	2,521	2,521	34,177	1,097
Australian dollars	3%	33,849	3,918	3,918	3,918	3,918	88,808
South African rands	8% to 8½%	30,664	12,876	12,876	12,876	12,876	15,342
Netherlands florins	3¾% to 7¾%	9,548	3,021	3,021	3,021	3,021	26,997
Others	4% to 10%	65,327	6,159	7,659	22,276	5,451	12,153
		2,117,038	418,384	617,316	273,271	312,768	507,334

(7) Contingent liabilities of the TOTAL Group at 31st December, 1972 were:—

	F.'000
Bills discounted, not yet matured	250,694
Leasing contracts	23,296
Other guarantees	1,430,143

DIVIDENDS

The Statutes (Memorandum and Articles of Association) of C.F.P. lay down that after making transfers to legal reserve and contingency fund the net profit shall be applied in providing a first dividend of 6 per cent. on the shares in issue; after further allocations to general reserves (including retained profits), the balance remaining is allotted in the proportions of a maximum of 5 per cent. to the Board, as tantièmes (share of profits), and 95 per cent. as a further dividend to shareholders.

In respect of the 5 years ended 31st December, 1972 dividends have been paid as follows:—

	1968	1969	1970	1971	1972
Issued capital (F.'000)	791,622	949,947(a)	949,947	1,068,690	1,068,690
Rate of dividend (including 6 per cent. first dividend)	13.2%	13.2%	13.2%	15.1%(b)	16%
Cost of dividends paid (F.'000)	104,494	125,393	125,393	161,491	170,990
Rate of dividends in francs per share	6.60	6.60	6.60	7.55(b)	8.00
Avoir fiscal (tax credit)	3.30	3.30	3.30	3.78(b)	4.00
Gross income of shareholder in francs per share	9.90	9.90	9.90	11.33(b)	12.00

Notes:

(a) In April 1970 the issued capital was increased by a capitalisation of reserves at the rate of 1 new share for 5 existing shares. At the 1970 Annual General Meeting, the shareholders approved a resolution stating that the new shares would be eligible for the dividends payable out of the 1969 profits, and accordingly the dividends were stated to be at the rate of 13.2 per cent. (F.6.60 per share) on an issued capital of F.949,947,000. The balance sheet as at 31st December, 1969, showed issued capital at F.791,622,000; this has been adjusted in the table above to the figure on which the dividend was declared.

(b) A 1 for 8 rights issue in October 1971 was made on the terms that the new shares would be entitled to the 1971 dividends only with effect from 1st July, 1971. Accordingly, the rates of dividend should strictly be shown as 16 per cent. on the old shares (costing F.151,992,000) and 8 per cent. on the new shares (costing F.9,499,000). The corresponding rates expressed as francs per share are F.8.0 on the old shares (F.12.0 gross) and F.4.0 on the new shares (F.6.0 gross).

ACCOUNTS

No audited accounts of the company have been made up for any period subsequent to 31st December, 1972.

Yours faithfully,

F. ANGLEYS
Expert Comptable
42, rue du Louvre, 75001 PARIS

HESKETH HARDY HIRSHFIELD & CO *Chartered Accountants*
Norwich House,
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APPENDIX TO ACCOUNTANTS' REPORT

Subsidiary, Joint Venture and Associated Companies

The following are the principal subsidiary, joint venture and associated companies of C.F.P.:-

	Company	*Year of incorporation*	*Country of incorporation*	*Issued share capital*	*C.F.P. %*	*Properties held attributable to other TOTAL Group companies %*	
	Exploration						
	Compagnie Française des Pétroles (Métropole)	1955	France	F 7,500,000	99.76	—	—
S	TOTAL Oil Marine Ltd.	1964	England	£ 40,000	100.00	—	—
S	Compagnie des Pétroles TOTAL (Afrique Ouest) COPETAO	1959	Senegal	FCFA 1,200,000,000	99.99	—	—
S	TOTAL-Compagnie Minière du Sénégal	1960	Senegal	FCFA 505,000,000	98.01	Various	0.90
S	TOTAL-Compagnie Africaine des Pétroles	1968	France	F 2,000,000	99.95	—	—
S	TOTAL Indonésie	1968	France	F 100,000	99.80	Various	0.20
S	TOTAL Exploration Australia (Pty) Ltd.	1955	Australia	A$ 3,000,000	—	TOD Australia	100.00
S	Eastcan Exploration Ltd.	1968	Canada	CAN $ 100,000	99.93	—	—
N	TOTAL Compagnie Minière et Nucléaire	1973	France	F 100,000	95.40	—	—
	Production						
JV	Iraq Petroleum Company Ltd.	1911	England	£ 83,500,000	23.75	—	—
JV	Mosul Petroleum Company Ltd.	1936	England	£ 12,830,000	23.75	—	—
JV	Basrah Petroleum Company Ltd.	1938	England	£ 12,400,000	23.75	—	—
JV	Qatar Petroleum Company Ltd.	1936	England	£ 11,180,000	23.75	—	—
JV	Abu Dhabi Petroleum Company Ltd.	1936	England	£ 11,210,000	23.75	—	—
JV	Abu Dhabi Marine Areas Ltd.	1954	England	£ 1,050,000	33.33	—	—
JV	Dubai Marine Areas Ltd.	1954	England	US $86,400	50.00	—	—
JV	Petroleum Development (Oman) Ltd.	1937	England	£12,983,040	10.00	—	—
N	Iranian Oil Participants Ltd.	1954	England	£ 500,000	6.00	—	—
S	Compagnie Française des Pétroles (Algérie)-CFP (A)	1953	France	F 210,000,000	85.00	—	—
S	TOTAL Algérie	1971	Algeria	DA 240,000,000	—	CFP (A)	100.00
A	Alrep	1971	Algeria	DA 200,000,000	—	TOTAL Algérie	49.00
S	TOTAL Petroleum (North America) Ltd.	1958	Canada	US $24,695,000 (Preferred Shares) CAN $7,022,182 (Ordinary Shares)	37.51*	TOTAL American Inc.	5.71*
S	TOTAL Marine Exploitatie Maatschappij N.V.	1964	Netherlands	Fl 2,000,000	99.95	—	—
S	TOTAL Marine Norsk	1965	Norway	NKr. 100,000	98.00	CFP (GB) / CFP (G)	1.00 / 1.00
JV	Compagnie Franco-Tunisienne des Pétroles	1958	Tunisia	DT 200,000	49.00	—	—
N	Santos Ltd.	1954	Australia	A$ 9,317,617	—	TOD Australia	14.00
	Refining						
S	Compagnie Française de Raffinage-CFR	1929	France	F 294,250,000	54.71	—	—
JV	Raffinerie de Strasbourg	1958	France	F 42,000,000	16.66	CFR	16.66
JV	Société de la Raffinerie de Lorraine	1967	France	F 50,000,000	—	CFR	51.00
N	Société de la Raffinerie de Brest	1972	France	F 1,000,000	—	CFR	26.20
A	Antar	1933	France	F 279,[illegible]	—	Socantar	55.87
JV	Lindsey Oil Refinery Limited	1956	England	£ 5,650,000	—	TOTAL Oil [illegible]	50.00
S	TOTAL Raffinaderij Nederland N.V.	1971	Netherlands	Fl 35,000,000	100.00	—	—
JV	Erdöl-Raffinerie Duisburg G.m.b.H.	1964	West Germany	DM 49,000,000	—	DETO	20.00
JV	Saarland Raffinerie G.m.b.H.	1965	West Germany	DM 20,000,000	20.00	—	—
S	Aquila S.p.A.	1934	Italy	L 10,000,000,000	—	TOTAL S.I.p.A.	98.50
A	Lombarda Petroli	1932	Italy	L 1,750,000,000	—	TOTAL S.I.p.A.	20.00
S	Industrie Chimiche Italiane del Petrolio S.p.A.-ICIP	1946	Italy	L 7,000,000,000	100.00	—	—
JV	Raffineria di Roma S.p.A.	1956	Italy	L 6,000,000,000	—	TOTAL S.I.p.A.	20.00

Continued

	Company	*Year of incorporation*	*Country of incorporation*	*Issued share capital*	*C.F.P. %*	*Properties held attributable to other TOTAL Group companies %*	
N	Sociedade Nacional de Refinação de Petroleos S.a.r.l.-SONAREP	1968	Portugal	Esc 300,000,000	24.52	—	—
JV	Société Africaine de Raffinage	1961	Senegal	FCFA 1,000,000,000	11.00	—	—
JV	Société Equatoriale de Raffinage	1965	Gabon	FCFA 1,200,000,000	18.75	—	—
JV	Société Ivoirienne de Raffinage	1962	Ivory Coast	FCFA 7,000,000,000	13.00	—	—
N	Société Malgache de Raffinage	1964	Madagascar	FMG 750,000,000	7.50	—	—
JV	National Petroleum Refiners of South Africa (Pty) Ltd.-NATREF	1967	South Africa	R 15,000,000	—	TOTAL Refining South Africa	30.00
S	TOTAL Refineries Australia Ltd.	1968	Australia	A$ 4,500,000	—	TOTAL Oil Consolidated Australia	100.00
S	TOTAL Leonard Inc.	1936	U.S.A.	US$ 3,000	—	TOTAL Petroleum (North America)	100.00
JV	Société Anonyme de la Raffinerie des Antilles	1969	France	F 25,000,000	25.00	—	—
	Petrochemicals						
S	TOTAL Chimie	1968	France	F 300,000,000	50.00	CFR	50.00
JV	ATO Chimie	1970	France	F 158,223,600	—	TOTAL Chimie	49.96
JV	Aquitaine TOTAL Emballage (ATO Emballage)	1954	France	F 10,722,200	—	TOTAL Chimie	49.93
A	Compagnie Française de l'Azote—COFAZ	1962	France	F 192,587,000	18.75	CFR / Others	16.67 / 0.08
A	Azolacq	1957	France	F 11,000,000	—	COFAZ	50.00
A	Société Normande de l'Azote	1965	France	F 8,000,000	—	COFAZ	56.00
A	Pétrosynthèse	1955	France	F 8,380,000	—	CFR	34.00
A	Société du Caoutchouc Butyl—SOCABU	1955	France	F 34,927,500	—	CFR	20.00
JV	Société Industrielle de Polyoléfines	1968	France	F 70,000,000	25.00	CFR	25.00
	Transportation and Storage						
S	Compagnie Navale des Pétroles—CNP	1931	France	F 50,000,000	74.97	CAN	24.00
A	Compagnie Auxiliaire de Navigation—CAN	1912	France	F 91,180,000	9.94	CFP (GB)	14.53
JV	Société du Pipeline Sud-Européen	1958	France	F 300,000,000	7.30	CFR	7.30
JV	Société des Transports Pétroliers par Pipeline—TRAPIL	1950	France	F 50,000,000	—	CFR / TCFD / Others	18.11 / 10.00 / 0.80
JV	Société du Pipeline Méditerranée-Rhône	1962	France	F 65,000,000	—	CFR / TCFD / TRAPIL	21.00 / 10.00 / 5.00
JV	Société de Stockage Géologique dans le Sel de Manosque GEOSEL MANOSQUE	1967	France	F 4,496,100	—	CFR	26.70
JV	Géomines-Caen	1967	France	F 4,000,000	—	CFR	30.00
S	Compagnie Camerounaise de Dépôts Pétroliers	1947	Cameroun	FCFA 150,000,000	99.95	—	—
S	Dépôt Océan Congo	1953	Congo	FCFA 150,000,000	—	TOTAL Afrique Ouest	99.90
	Distribution						
S	TOTAL—Compagnie Française de Distribution-TCFD	1966	France	F 171,094,450	0.01	CFR / CAPIC / Others	38.03 / 40.32 / 0.23
S	TOTALGAZ-Compagnie Française des Gaz Liquéfiés	1967	France	F 40,000,000	—	CFR / CAN / Others	72.22 / 4.96 / 6.40
JV	Société Anonyme des Pétroles Mory—SAPM	1933	France	F [illegible]	49.97	—	—
S	TOTAL Oil Great Britain Ltd.	1955	England	£ 27,000,000	100.00	—	—
S	TOTAL Nederland N.V.	1935	Netherlands	Fl 10,000,000	100.00	—	—
S	TOTAL Belgique S.A.—TOTAL Belgie N.V.	1949	Belgium	BF 150,000,000	100.00	—	—
S	Deutsche TOTAL G.m.b.H.—DETO	1965	West Germany	DM 25,000,000	100.00	—	—
JV	Deftrol G.m.b.H.	1957	West Germany	DM 2,500,000	50.00	—	—
S	TOTAL Suisse S.A.	1946	Switzerland	SF 28,000,000	99.99	—	—
S	TOTAL Austria G.m.b.H.	1953	Austria	Sch 59,000,000	100.00	—	—
S	Petroleum S.A.	1948	Greece	Dr 67,000,000	99.44	—	—
S	TOTAL España S.A.	1964	Spain	Pts 56,000,000	100.00	—	—
N	Sociedade Nacional de Petroleos S.a.r.l.—SONAP	1933	Portugal	Esc 200,000,000	20.00	OFP	4.00
S	TOTAL Societa Italiana per Azioni	1937	Italy	L 23,000,000,000	100.00	—	—
S	TOTALGAS Italiana S.p.A.	1951	Italy	L 2,000,000,000	—	TOTAL S.I.p.A.	99.72
S	TOTAL Liban S.A.L.	1951	Lebanon	L£ 10,000,000	99.95	—	—
JV	TOTAL Tunisie	1948	Tunisia	DT 150,000	—	OFP	49.90
JV	Fina Tunisienne S.A.	1947	Tunisia	DT 400,000	—	OFP	49.95
S	TOTAL Maroc	1928	Morocco	DH 17,000,000	99.95	—	—
S	TOTAL Afrique Ouest	1947	France	F 18,000,000	100.00	—	—
S	TOTAL Nigeria Ltd.	1968	Nigeria	£N 1,500,000	97.86	—	—
S	TOTAL Ghana Ltd.	1960	Ghana	NC 1,200,000	100.00	—	—
S	The Nile Import and Trading Oil Co. Ltd.—NITOC	1955	Sudan	LSD 300,000	—	OFP	100.00
S	TOTAL Mer Rouge	1950	Djibouti	FDj 60,000,000	0.02	OFP / Others	99.90 / 0.04
S	TOTAL Oil Products (East Africa) Ltd.	1965	Kenya	KSH 23,000,000	—	OFP	100.00
JV	TOTAL Uganda Ltd.	1966	Uganda	USH 3,500,000	—	OFP	50.00
S	TOTAL Tanzania Ltd.	1966	Tanzania	TSH 3,500,000	—	OFP / Others	99.99 / 0.01
S	TOTAL Zambia Ltd.	1969	Zambia	KWA 500,000	100.00	—	—
S	TOTAL Malawi Ltd.	1969	Malawi	KMA 10,000	99.95	—	—
S	TOTAL South Africa (Pty.) Ltd.	1954	South Africa	R 18,000,000	70.83	—	—
S	TOTAL Océan Indien	1964	France	F 10,000,000	79.99	—	—
S	TOTAL Mauritius Ltd.	1956	Mauritius	RMs 600,000	79.75	—	—
S	TOTAL Pacifique S.A.R.L.	1963	New Caledonia	FCFP 30,000,000	99.09	Various	0.91
S	TOTAL Australia Ltd.	1954	Australia	A$ 8,000,000	—	TOTAL Oil Consolidated Australia Ltd.	100.00
S	Air TOTAL France	1957	France	F 16,000,000	99.99	—	—
S	Air TOTAL International S.A.	1966	Switzerland	SF 500,000	99.40	—	—
S	TOTAL International Ltd.	1967	Bermuda	BE$ 72,000	99.99	—	—
S	TOTAL Trading International S.A.	1967	Switzerland	SF 500,000	49.90	—	—
S	TOTAL Transport Corporation	1956	Panama	US$ 1,000,000	90.00	OPSA	10.00
	Research and Technical						
S	Compagnie Française des Pétroles (Gestion et Recherches)—CFP (GR)	1927	France	F 1,500,000	99.84	—	—
S	Compagnie Française des Pétroles (Gérance)—CFP (G)	1956	France	F 200,000	99.95	—	—
S	Omnium de Recherches et d'Exploitations Pétrolières—OMNIREX	1957	France	F 45,000,000	60.00	—	—
A	Compagnie Générale de Géophysique	1931	France	F 15,120,000	3.28	Omnirex	40.00
N	Compagnie Maritime d'Expertises—COMEX	1962	France	F 7,000,000	—	Omnirex	12.00
N	E.B. Dora	1965	France	F 7,500,000	—	Omnirex / Others	8.99 / 0.01
A	Société Maritime de Services-SOMASER	1970	France	F 12,000,000	—	CNP / C.G. Marit.	42.00 / 20.00
A	Compagnie Française d'Etudes et de Construction—TECHNIP	1958	France	F 8,842,400	18.22	—	—
N	Subsea Equipment Associates Ltd.—SEAL	1970	Bermuda	US$ 12,000	—	Westotal Ltd.	50.00
	Financial and Investment Companies						
S	Omnium Français de Pétroles—OFP	1920	France	F 70,038,000	81.10	—	—
S	Société Française des Combustibles Liquides—SFCL	1928	France	F 12,000,000	—	OFP	99.95
S	Omnium de Pétroles S.A.—OPSA	1948	Switzerland	SF 16,800,000	—	OFP	94.92
A	Crédit Chimique	1966	France	F 38,000,000	—	SFCL	44.97
A	Socantar	1928	France	F 96,487,500	23.71	—	—
S	Compagnie Auxiliaire de Placements Industriels et Commerciaux—CAPIC	1946	France	F 48,000,000	0.32	CFR	99.63
N	Groupement Interprofessionnel Financier Antipollution	1971	France	F 7,371,500	—	CFR	3.39
S	TOTAL Refining South Africa (Pty.) Ltd.	1967	South Africa	R 1,000,000	—	TOTAL South Africa	100.00
S	TOTAL Holdings (Australia) Pty. Ltd.	1956	Australia	A$ 4,000,000	100.00	—	—
S	TOTAL Oil Consolidated Australia Ltd.	1968	Australia	A$ 13,000,000	—	TOTAL Holdings (Australia) Pty. Ltd.	100.00
S	Petrochemical Holdings Ltd.	1960	Australia	A$ 5,000,014	—	TOTAL Oil Consolidated Australia Ltd.	66.21
S	TOTAL Oil Developments (Australia) Pty. Ltd.	1965	Australia	A$ 3,000,000	100.00	—	—
S	TOTAL American Inc.	1966	U.S.A.	US$ 17,500	100.00	—	—
N	Westotal Ltd.	1970	Bermuda	US$ 12,000	50.00	—	—
A	COSIFRANCE	1958	France	F 20,000,000	—	SFCL	19.11

*The figures given for TOTAL Petroleum (North America) Ltd. are percentages of voting power.

Note: The letters in front of each company indicate the consolidation treatment adopted for the year ended 31st December, 1972, as follows:— S —Global Consolidation; JV—Proportional Consolidation; A —Associated Company Consolidation; N —Companies not consolidated.

GENERAL INFORMATION

C.F.P. is a société anonyme (joint stock company) registered under and in accordance with the laws of France (Act dated 24th July, 1966 and Decree in respect of commercial companies dated 23rd March, 1967, as amended).

1. FUTURE ANNUAL ACCOUNTS

C.F.P. will continue to publish consolidated annual accounts which, while retaining methods of presentation normally adopted by French companies, will be prepared using accounting principles consistent with those used for the purposes of the Accountants' Report included in this Document. These consolidated accounts will be audited in accordance with the standards generally accepted in the United Kingdom and prepared in accordance with the requirements of The Stock Exchange.

2. STATUTES

The Bye-laws of C.F.P. ("the Company") contain provisions (*inter alia*) which are summarised as follows:

Rights of Shareholders

1. General. Save as hereinafter mentioned the "A" shares and the "B" shares rank *pari passu* for all purposes.

2. Votes. At any general meeting an "A" shareholder is entitled to twenty votes per share and a "B" shareholder holding two or more "B" shares to one vote per share. (*The Board of C.F.P. has undertaken to propose to an extraordinary general meeting to be held before 31st December, 1974, that the Statutes be changed to provide that the holder of any one "B" Share should have the right to attend and vote at general meetings.*) Provided that while it holds at least 25 per cent. of the capital of the Company the French State is entitled to such a number of "A" shares as will result in its total voting rights being equivalent to its percentage shareholding plus 5 per cent. of the votes capable of being cast at any general meeting. At any such meeting the holders of not less than 25 per cent. of the issued capital may demand a secret ballot.

3. Ownership. The "A" shares are registered and are subject to restrictions on transfer which require them to be held exclusively by the French State (or State public bodies) or by French persons either individuals or corporations. The "B" shares on becoming fully paid up are either registered or bearer shares save that the "B" shares held by the French State (or State public bodies) must be registered and the formalities of transfer for such State "B" shares are those applicable to the "A" shares.

4. Dividends. The net profit (as defined by Bye-law 44) of the Company in each financial year is on the recommendation of the Directors allocated as follows:

(i) 5 per cent. is appropriated to legal reserve fund until such reserve fund is equivalent to 10 per cent. of the issued share capital. This appropriation is required by law only if and to the extent that the legal reserve fund falls below such percentage;
(ii) such a percentage as the Company in general meeting thinks fit is appropriated to a contingency reserve fund;
(iii) such a percentage as is required to pay a non-cumulative first dividend of 6 per cent. on paid up share capital is applied for that purpose;
(iv) such a percentage as the Company in general meeting thinks fit is allocated to reserves for specified purposes;
(v) such a percentage as the Company in general meeting thinks fit is carried forward;
(vi) the surplus is divided as to 5 per cent. to the Board of Directors and as to 95 per cent. to the shareholders. (*In 1970, 1971 and 1972 the Board's share of this surplus was, at its own request, limited to F.3,000,000.*)

Payment of dividends must be made within nine months from the end of the financial year.

5. Reserves. All or any part of the reserves of the Company (other than the legal reserve fund) may by resolution in general meeting on the recommendation of the Directors be distributed to shareholders in cash or shares *pro rata* to shareholdings as at the date of such distribution.

6. Amortisation. The Company in general meeting may decide on a partial or total amortisation or redemption of the whole or any part of the issued share capital of the Company. In exchange for any shares so amortised or redeemed, a shareholder receives a participation certificate which confers on him all rights attaching to unredeemed shares other than the right to the first dividend of 6 per cent. referred to above and the right to a return of share capital on liquidation.

7. Liquidation. After discharging all liabilities and liquidation expenses, surplus assets are applied first in repaying to shareholders (other than to holders of amortised shares) capital paid up on their holdings and secondly in repaying to shareholders the amount of any reserve funds standing to their credit. Any existing surplus is then divided between shareholders *pro rata.*

8. Variation of Rights. The rights of any class of shares may be modified only with the consent of an Extraordinary General Meeting of shareholders which to become final must be ratified by a resolution of a special class meeting of the holders of the class of shares concerned, such resolution to be passed by a two-thirds majority of the votes held by those present and voting in person or by proxy.

Increases in Capital

The Company in general meeting alone has the right on the recommendation of the Directors to sanction a increase in the capital of the Company. The powers required to effect an increase of capital and to fix the terms ma be delegated to the Board provided the increase in issued share capital is effected within five years from the da of the relevant shareholders' resolution.

On any increase of capital the French State has a right to subscribe for such a number of shares as will ensu that it holds not less than 35 per cent. of the issued capital of the Company subject to the State at all times exercisin its subscription rights in full. In so far as such subscription rights are not fully exercised, its preferential subscriptio rights on future issues are reduced *pro rata.* After giving effect to the right of priority of the French State, th Directors may specify which of the shares in the increased capital are to be offered on the authority of the Com missaires du Gouvernement in priority to French individuals or companies (whether or not shareholders). Th balance remaining must be offered first *pro rata* to the existing shareholders other than the French State. (*In th event of an increase in the issued capital, the Board of C.F.P. has undertaken to obtain the shareholders' permissio in general meeting prior to issuing for cash any shares other than to existing shareholders and see paragraph 7 "Miscellaneous".*)

Directors

1. The Company is administered by a Board of Directors consisting of at least six and not more than twel members appointed by the shareholders in general meeting. All Directors must be of French nationality and th appointment approved by both the Minister of the Economy and Finance and the Minister of Industrial and Scienti Development in France. Under French law any Director who has any material interest in a proposal, arrangement contract must declare his interest and is not permitted to vote thereon.

2. Each Director must own beneficially at least 20 "A" or "B" shares as qualifying shares. These shares a registered, are non-transferable and are deposited with the Company for the duration of his duties.

3. If a company or public corporate body is appointed as a Director it must designate a permanent represent tive acceptable to the Board and aged less than 70.

4. A Director holds office for six years at the end of which he retires by rotation. A Director may remain office after attaining the age of 70 years as long as the number of Directors aged more than 70 does not at the e of the financial year exceed one third of the Board. If this limit is exceeded, the oldest Director is automatica deemed to have resigned.

5. When a vacancy occurs it may be filled by the Board nominating a new Director subject to ratification the next Annual General Meeting. A Director so appointed acts for the remainder of the period of office of h predecessor.

6. Directors receive in addition to the allocation of a share of the net profit of the Company, as indicated abov attendance fees the amount of which is fixed by the shareholders in general meeting.

7. The Chairman of the Board of Directors is responsible for the management of the Company. He m propose to the Board that one or two general managers be appointed to assist him. The general managers do n necessarily have to be chosen from amongst the Directors. The Board may also appoint an advisory committee wh may include Directors in its number.

The share of net profit and attendance fees referred to above and due to the Board are allocated amongst i members as they deem fit. A Director who has been appointed to the advisory committee may be paid a larg proportion of these emoluments than other Directors. The Chairman of the Board, the general managers and oth executives may receive fixed salaries and/or commissions which are treated as part of the operating expenses of t Company.

8. The Chairman and the general managers cease to hold office not later than their sixty-fifth birthday.

Commissaires du Gouvernement

The Minister of the Economy and Finance and the Minister of Industrial and Scientific Development in Fran each has the power to appoint a permanent representative to the Board known as a Commissaire du Gouverneme each of whom has the power and the duty to ensure that the rights and interests of the State pursuant to the statu or derived from the agreements with the State (referred to below) are duly exercised and protected. To this end t Commissaires du Gouvernement have the same powers *inter alia* as those of the Directors and may exercise t same rights of investigation as are vested in the Company's Auditors.

Borrowing Powers

Apart from the issue of debentures and loan stocks which the Board of Directors cannot undertake unless authorised by the shareholders in general meeting, the Directors may in accordance with French law exercise all t powers of the Company to borrow money on such terms and conditions as they consider appropriate.

3. AGREEMENTS WITH THE STATE ("THE CONVENTIONS")

The French State enjoys certain rights and privileges as a shareholder in C.F.P. arising from the 1924 and 19 Conventions both of which were ratified by the French Parliament by an Act dated 25th July, 1931.

The 1924 Convention

This was signed on 17th May, 1924 and its main provisions (as later amended) may be summarised as follows:

(a) C.F.P. was authorised to acquire the French State's interest in IPC.
(b) The State was granted a preferential right to purchase in wartime up to 80 per cent. of the petrole products vesting in C.F.P. by reason of its participation in IPC.
(c) The parties agreed that the profits accruing to C.F.P. from its investment in IPC and its sister compan were to be paid into a special account in the books of C.F.P. and after payment to C.F.P. of a 10 per ce cumulative dividend on its investment and after appropriate transfers to reserves, the surplus profit r maining was divisible between C.F.P. and the French State according to the terms and conditions set o in the 1924 Convention, the amount due to the State being the Share of the French State in Super-Prof referred to in the Accountants' Report.

The 1930 Convention

This agreement was signed on 25th June, 1930 and its main provisions (as later amended) may be summar as follows:

(a) C.F.P. agreed with the French State to increase its capital and to issue the "A" shares to the State and many "B" shares as were required to give the State initially a 25 per cent. holding in the equity of C.F with an option to increase it to 35 per cent., which option was exercised by the State on 18th August, 19
(b) C.F.P. agreed to amend its statutes to ensure that subject to the State's holding being not less than 25 p cent. of the issued share capital, the State would have voting rights equivalent to its percentage sha holding plus 5 per cent. of the total votes capable of being cast at any general meeting. The state was al given the right to appoint two Commissaires du Gouvernement whose functions and powers are refer to above.
(c) C.F.P. and the State agreed that they would, either jointly or in conjunction with any other State approve third party, at all times retain control of CFR. To this end C.F.P. undertook that in the event that it wishe to sell any shares whose disposal would reduce its holding to less than 48 per cent., it would transf such shares only to the State or any State approved third party.
Furthermore C.F.P. agreed to take up all the shares of CFR which might be allotted to it pursuant to rights issues by CFR.

4. ISSUES OF SHARE CAPITAL

At 21st September, 1971, the share capital of C.F.P. consisted of 80,329 "A" shares of F.50 each an 18,808,808 "B" shares of F.50 each.

Since that date other than issues by wholly owned subsidiaries of C.F.P. to C.F.P. or other wholly own subsidiaries of C.F.P., the following issues of shares have been made by C.F.P. and its subsidiaries:—

(i) In October, 1971, C.F.P. issued 10,416 "A" shares of F.50 each and 2,364,451 "B" shares of F.50 each a price of F.160 per "A" or "B" share by way of rights to the then existing shareholders in the proportio of one new share for every eight shares then held, the designation of the new shares as "A" or "B" shar being determined according to the provisions of the 1930 Convention;
(ii) In December, 1971, CFR issued 1,177,000 shares of F.50 each by way of capitalisation of reserves to th then existing shareholders in the proportion of one new share for every four shares then held;
(iii) In May, 1972, Société Française des Combustibles Liquides issued 19,957 shares of F.100 each by wa of capitalisation of reserves to the then existing shareholders in the proportion of one new share for ever five shares then held, except that Omnium Français de Pétroles (a subsidiary of C.F.P.) renounced i rights in respect of 258 of its then existing shares;
(iv) In December, 1972, TOTAL Chimie issued 2,000,000 shares of F.100 each at par. 50 per cent of this issu was subscribed by each of C.F.P. and CFR.

On the 13th September, 1973, the Board of TOTAL Petroleum (North America) Limited, which is listed on th Paris and the American Stock Exchanges, resolved to issue U.S. $15,000,000 of Can $1 Ordinary Shares at a pri equal or nearly equal to the market price prevailing at the date of the issue. The issue is subject to the approval o the Securities and Exchange Commission and subject thereto is scheduled for late October 1973.

5. PROPERTIES

The following is a list of properties of the TOTAL Group which are of material importance to C.F.P. and it subsidiaries, all of which are freehold, except where otherwise indicated:—

Situation	*Approximate Site Area (sq. metres)*	*Approximate Floor Area (sq. metres)*
1. Offices		
Paris 16 ème	11,134	13,500
Levallois, Hauts-de-Seine	8,200	1,261
2. Residential		
38 flats in Paris	—	3,600
3. Refineries		

Situation	*Approximate Site Area (Hectares)*	*Owned by*	*Note*
France			
Gonfreville, Le Havre, ("Normandie")	422	CFR	1
La Mède, Marseille, ("Provence")	232	CFR	
Herrlisheim, Strasbourg	300	Raffinerie de Strasbourg	
Hauconcourt, Metz	110	Société de la Raffinerie de Lorraine	
Great Britain			
Immingham, Lincolnshire	382	Lindsey Oil Refinery Limited	
Italy			
Trieste	100	Aquila S.p.A.	
Mantua	95	Industrie Chimiche Italiane del Petrolio S.p.A.	
Rome	100	Raffineria di Roma S.p.A.	
Villasanta, Milan	55	Lombarda Petroli	
Netherlands			
Vlissingen	200	TOTAL Raffinaderij Nederland N.V.	2
West Germany			
Klarenthal	35	Saarland Raffinerie G.m.b.H.	
Duisburg	82	Erdöl—Raffinerie Duisburg G.m.b.H.	3
United States of America			
Alma, Michigan	146	Total Leonard Inc.	
South Africa			
Sasolburg	200	National Petroleum Refiners of South Africa (Pty) Ltd.	
Australia			
Matraville, Sydney	20	TOTAL Refineries Australia Ltd.	4

Notes:

(1) The site of the refinery "Normandie" at Gonfreville, Le Havre, is held on a concession from the Port of Le Havre expiring on 14th March, 2090 at an indexed rental, which is currently F.1,400,000 per annum.

(2) The refinery at Vlissingen is under construction.

(3) The refinery at Duisburg is held on a lease expiring on 31st December, 2000, at a current annual rental of DM 820,000 which is subject to review in 1976 and every five years thereafter.

(4) The refinery at Matraville, Sydney, is held on a lease at a current annual rental of A $120,000 which is subject to review in 1975 and every seven years thereafter. This lease is perpetual so long as TOTAL Refineries Australia Ltd. maintains a refinery on the land.

CFR and TOTAL Compagnie Française de Distribution, own freehold 2,140 filling stations and 94 depots in France and the TOTAL Group owns freehold 3,800 filling stations and 250 depots outside France. There are in addition 15,024 filling stations owned and operated on leasehold or other arrangements.

6. MATERIAL CONTRACTS

The following contracts, not being contracts in the ordinary course of business, have been entered into within two years before the date hereof and are or may be material:—

1. Ekofisk

A series of Agreements, save where otherwise specified all dated 10th August, 1973, relating to the North Sea oil and gas field known as Ekofisk:—

1. The Phillips Group Agreement dated 20th July, 1973, between the oil companies, the parties thereto.

2. Loan Agreement dated 10th August, 1973 between (1) Norpipe A/S ("the Borrower") (2) the members of the Phillips Ekofisk Group including TOTAL Marine Norsk A/S (a wholly owned subsidiary of C.F.P.) ("the Co-Venturers") (3) First National City Bank and Société Générale de Banque S.A. and certain other banks ("the Banks") whereby the Banks granted to the Borrower a loan facility of U.S. $370,000,000 for a total period of 10 years at an interest rate of ¾ per cent. above the weighted average of the London inter-bank Euro-currency borrowing rate for similar loans with a commitment commission varying between ⅜ per cent. and ½ per cent. per annum on undrawn balances repayable in half-yearly instalments commencing four years from the date of signature and the Co-Venturers made or gave or undertook to make or give certain representations and warranties concerning themselves to the Banks and entered into certain covenants with each other with the Borrower and with the Banks and whereby the Co-Venturers agreed to indemnify Phillips Petroleum Company Norway against any costs or damages for which it might become liable as agent on behalf of the Borrower.

3. Loan Agreement dated 10th August, 1973 between (1) Norpipe Petroleum U.K. Limited and (2) and (3) being the parties (2) and (3) to Contract 2 and to the like effect as Contract 2 save that the facility is U.S. $130,000,000.

4. Loan Agreement dated 10th August, 1973 between (1) Norsea Pipeline Limited and (2) and (3) being the parties (2) and (3) to Contract 2 and to the like effect save that the facility is U.S. $100,000,000.

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'OINTMENTS

)r. Main joins Boots Board

Peter T. Main, director of :h, has been appointed to Board of THE BOOTS ANY.

★

Orlando Oldham has re- as a director of ROYAL ESTER, as his appointment he company has been ter- d by mutual agreement.

★

Brian Bennett and Mr. Mark ni have been appointed managing directors of the division of DIXONS OGRAPHIC.

★

Peter Maitland is to join the of GLANVILL ENTHOVEN). and also of Glanvill ven (Overseas).

★

Brian Bennett and Mr. Mark mi have been appointed managing directors of the division of DIXON'S OGRAPHIC.

★

T. R. Lister has been ited a director of WOMB- , FOUNDRY AND ENGIN- IG COMPANY.

★

John C. Gardner, a vice- lent of the FIRST NATIONAL BANK, has been assigned ndon as director of European and company secretary of the LEVEX GROUP. Mr. William Fisher, deputy chairman of the Fisher Walters Group, has been elected to the Levex Board as a non-executive director.

★

Nicholas Coleman, formerly e director of Nova Knit, has appointed finance director

★

Mr. Leonard B. Boyle has been elected president of the FEDERATION OF SAVINGS AND LOAN INSTITUTIONS FOR CONSTRUCTION by the European Congress of Building Societies. Mr. Boyle is chairman of the Building Societies Association, London, and general manager of the Principality Building Society, Cardiff.

★

Mr. J. W. Hayter has been appointed an executive director of PICKFORD DAWSON AND HOLLAND. Mr. Hayter has acquired an interest in the company.

★

Mr. Jack Skeats has been appointed *managing* director of ACCESS EQUIPMENT. Mr. Skeats was appointed company secretary in 1962 and became financial director in 1971.

★

Mr. William L. Hayward has been named vice-president—international—for the Power Systems Company of WESTINGHOUSE ELECTRIC CORPORATION.

★

Mr. W. P. G. Wilson is to become director of the PAINTMAKERS ASSOCIATION from January 1, to succeed Mr. Keith S. Florry, who retires at the end of this year and will become consultant to the association.

★

Mr. Stephen Crown and Mr. Patrick Robson have been appointed directors of WILLINGS INTERNATIONAL.

★

Mr. O. J. Owen has been appointed a divisional director of the financial institutions division of HARTLEY COOPER AND CO. and Mr. R. Sperryn-Jones a divisional director of its American non-marine division.

Mr. P. J. Maitland has resigned his directorships with effect from September 28 on leaving the Hartley Cooper group.

VEHICLE GROUP MOVES TO WARRINGTON

One block of Warrington New Town's unit factories at the Grange Employment Area has been let to a newly-established company of commercial vehicle body-builders. Vanplan. It is occupying 38,000 square feet near the junction of M6 and M62.

The company has started recruiting staff, estimated at 50 in early stages, increasing later to about 150.

Three blocks of unit factories are being built at the Grange and negotiations are in hand for further lettings.

DAF (G.B.) surcharge on prices

By David Walker

DAF MOTORS (GB) is to introduce a floating surcharge on the prices of its Dutch-made car range because of the continuing fluctuations in currency values.

The move comes in the wake of last week-end's revaluation of the guilder and follows by less than a week the announcement of increases of between 3 per cent. and 6 per cent. in the price of most DAF models sold in this country.

It makes DAF Motors the third major car importer to introduce a floating surcharge on its prices.

Last month, a similar scheme was announced by Volkswagen GB and its associated company, Audi NSU GB.

DAF's surcharge system begins to-day but will not affect dealers' existing stocks of vehicles. It is to be based on an exchange rate of 6.20 guilders to the pound, and is likely to be changed on a monthly basis though, in the event of particularly heavy exchange rate fluctuations, weekly alterations look possible.

A decision as to its initial level will be taken to-day when the currency markets re-open.

ScanDutch ship group expands

THE SCANDUTCH containership group is using smaller vessels to expand its "feeder" services to more areas and countries in the Far East. It already has six large vessels operating on a regular 10-day schedule between Europe and the Fast East.

"Mainline" ScanDutch ships serve the ports of Gothenburg, Hamburg, Bremerhaven, Rotterdam, Singapore, Hong Kong, Kobe and Tokyo. "Feeder" services are also in full operation between Kobe and Pusan on the Hong Kong-Keelung and Haohsiung-Kobe route, and in Europe between Hamburg and Helsinki, Bilbao and Rotterdam, London and Rotterdam.

HUMBER AIRWAYS' FOURTH AIRCRAFT

Humber Airways, air taxi and air charter operators and a member of EWL—the Transport Division of Ellerman Lines, has added a fourth aircraft to its fleet—a new Piper Aztec E. It joins the two nine-seat Britten Norman Islanders and another Piper Aztec in Humber Airways' fleet.

TELFORD PLANS AQUATIC CENTRE

Department of Environment approval for an aquatic centre and recreational and sports area at Dale End, Ironbridge, is being sought by Telford Development Corporation.

Likely to cost over £54,000, the scheme aims to improve the appearance of the area by opening another section of the river bank for the people to enjoy in the Severn Gorge.

TRIP TO SWEDEN FOR BANK AWARD WINNER

The Bank of England European Banking Scholarship for 1973 has been won by Mr. D. Penfold, of the National and Commercial Banking Group.

From next week, Mr. Penfold will spend about three months in Sweden, studying official controls over the banking system there compared with those in the U.K. His visit will include periods with six Swedish banks.

Mr. Penfold, 33, is married with four children. He is a member of the economics office staff of his banking group.

THIRD EDITION OF GROUP ACCOUNTS BOOK READY

The third edition of "Bogie on Group Accounts" has been published. The edition has been extensively revised and extended.

The book is designed as a practical ready reference book for accountants. For the senior student it gives an authoritative interpretation of the many problems arising on the consolidation of accounts.

FREIGHTMASTER PLANT EXPANDS

York Trailer Company, which makes Freightmaster, the frameless semi-trailer van, truck equipment and ISO shipping containers, has spent more than £350,000 on buildings and equipment at its Northallerton factory.

It has launched a labour recruitment in Yorkshire and the North-East, particularly in areas where there is unemployment. A vehicle with members of the company's personnel staff will visit York, Hull, Whitby, Scarborough, Sunderland and Newcastle.

F.T. SHARE INFORMATION SERVICE

BRITISH FUNDS

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
		"Shorts" (Lives up to Five Years)				
10J	10D	Treasury [illegible] 1973	53¾	[illegible]	5.32	11.21
15J	15D	[illegible] 1974	96[illegible]	[illegible]	5.46	10.89
10M	10S	Treasury [illegible] 1974	95[illegible]	[illegible]	5.74	10.17
17J	17D	Treasury [illegible] 1974	96[illegible]	[illegible]	7.02	10.23
15F	15A	Treasury [illegible] 1975	94[illegible]	[illegible]	6.35	10.14
		Treasury [illegible] 1975	95¾	—	8.35	10.89
15F	15A	[illegible] 73-75	89[illegible]	[illegible]	3.33	6.83
1M	1S	[illegible] 1976	90[illegible]	[illegible]	7.19	11.12
15F	15A	Treasury [illegible] 1976	89¼	[illegible]	7.28	10.92
1M	1S	Victory 4pc 1976	96½	[illegible]	4.19	6.55
1J	1D	Treasury [illegible] 1976	98¼	—	10.65	10.98
10M	10S	Treasury [illegible] 1977	86[illegible]	[illegible]	7.20	10.98
15M	15S	Electric [illegible] 1974-77	83[illegible]	[illegible]	5.61	8.74
20J	20D	Transport [illegible] 72-77	82[illegible]	[illegible]	4.93	9.50
15M	15S	Treasury 9pc 1978	91[illegible]	[illegible]	9.79	11.37
		Five to Fifteen Years				
[illegible]	26S	Exchequer [illegible] 78-79	70[illegible]xd	[illegible]	6.37	10.68
[illegible]	[illegible]	Treasury [illegible] 1979	75	[illegible]	4.29	9.75
[illegible]	[illegible]	Electric [illegible] 74-79	72[illegible]xd	[illegible]	5.85	10.44
[illegible]	[illegible]	Do [illegible]	71[illegible]	[illegible]	5.97	10.08
[illegible]	[illegible]	Treasury [illegible] 1980	9[illegible]	30.7	10.04	11.32
[illegible]	[illegible]	Treasury [illegible] 77-80	69[illegible]	[illegible]	5.13	10.14
[illegible]	[illegible]	Funding [illegible] 78-80	75[illegible]	[illegible]	7.72	10.35
[illegible]	[illegible]	Treasury [illegible] 79-81	66[illegible]	[illegible]	5.28	10.08
[illegible]	[illegible]	Do [illegible] 78-82	[illegible]	[illegible]	10.00	11.32
[illegible]	[illegible]	Funding [illegible] 82-84	71	[illegible]	7.65	10.29
[illegible]	[illegible]	Treasury [illegible]	83½	[illegible]	10.41	11.21
[illegible]	[illegible]	Funding [illegible] 85-87	71	[illegible]	9.30	11.03
[illegible]	[illegible]	Treasury [illegible] 85-88	75[illegible]	[illegible]	10.42	11.41
[illegible]	1J	Transport [illegible] 78-88	47½	[illegible]	5.43	9.97
		Over Fifteen Years				
[illegible]	[illegible]	Treasury [illegible]	56[illegible]	[illegible]	8.84	10.74
15J	15D	Treasury [illegible] 87-90	73[illegible]	[illegible]	10.82	11.47
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Undated

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DRAPERY AND STORES—Continued

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INDUSTRIALS—Continued

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PROPERTY

PROPERTY—Continued

Dividends Paid		Stock	Price	Last xd	Net Div.	Cvr	Y'ld pe	P/E
—	—	Cntrovincial 20p	119	3.9	6.9	2.9	1.7	23.5
May	Oct.	Do Cap 20p	119	9.4	—	—	—	—
—	—	Chesterfield	244	2.7	11	1.8	1.6	44.2
Jan.	July	Chown Secs.	210	11.12	Q16	3.0	1.9	20.8
Dec.	June	Churchb'ry Est.	266	2.7	♦12.5	1.6	1.7	53.3
April	Jan.	City & Borough	38½	4.6	M4.9	1.0	4.5	30.9
Apr.	Sept.	City Offices	102	13.8	Qt56.9	1.2	2.4	(48.8)
—	—	Clarke Nickolls	86	18.6	Q7.6	3.3	2.2	19.2
Sept.	Feb.	Control Secs. 10p.	65	3.9	9.2	♦	2.0	♦
April	Oct.	Cornwall 5p	104	3.9	20	6.0	1.4	17.3
August		Cntry New T 10p	59	2.7	8.4	1.9	1.5	52.9
July	Oct.	Countryside 5p	76xd	17.9	91	♦	8.6	♦
June		Cnty & Dist. 10p	121	—	8.4	1.9	1.0	75.7
Mar.	Sept.	Cox Inds. 10p	51	—	b25	1.7	7.0	12.2
Mar.	Nov.	Daejan (Hldgs)	118	13.8	12.6	2.0	3.8	18.3
July	Feb.	Dares Est. 20p	59	18.6	16.2	(13)8	5.7	—
—		Do Pfd. 8p (1pPd)	10½	18.6	Q5¼	(13)9	4.0	—
April	Dec.	Dorrington 10p	75	3.9	23.4	1.9	4.5	16.5
Feb.	Sept.	Ests. Prop. Inv.	119	13.8	9.9	1.2	3.0	(37.0)
April	Sept.	Evans Leeds	117	2.7	d14	1.7	4.3	19.4
July		Forum Props. 10p	37½	30.7	2.3	1.8	0.9	89.3
July		Fraternal Est. 5p.	37	2.7	20	2.3	3.9	16.1
Jan.	Sept.	Gt. Portland 50p	264	16.7	5.9	1.6	1.6	56.3
April	Dec.	Green (R.) 10p	64	12.3	Qt20	2.1	3.1	22.2
May	Dec.	Greencoat 5p	27	13.11	Q♦18	1.3	3.3	33.4
May	Dec.	Greensiti Bt 10p	127	4.6	Qt56	2.7	4.4	12.7
Nov.	April	Greensquare 10p.	70	2.7	Qtd40	2.1	5.7	12.0
Jan.	May	Grovew'd Sec. 5p.	42½	9.4	th11	13.9	2.8	20.0
April	May	Guardian Prop.	132	3.9	d7.7	1.9	2.1	30.9
June		Hammerson 'A'	585	14.5	18	1.8	1.1	72.9
Mar.	July	Haslemere 10p	315	18.6	22	2.0	1.0	70.0

SHIPBUILDERS, REPAIRERS

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TEXTILES—Continued

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

TRUSTS—Continued

Finance, Land, etc.

OILS

RUBBERS AND SISAL

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EASTERN RAND

FAR WEST RAND

O.F.S.

FINANCE

DIAMOND AND PLATINUM

CENTRAL AFRICAN

AUSTRALIANS

TINS

COPPER

MISCELLANEOUS

Lombard

When it's direct rule for us all

BY C. GORDON TETHER

The Prime Minister caused a furore last week by offering what many people held to be conflicting interpretations of his warning that Ulster would face total integration with the U.K. if it refused to toe the Downing Street line on the setting up of an executive for the province. Here is a preview of a speech which Mr. Heath could well be making shortly interpreting his Ulster stand in terms of his European vision.

"The Leader of the Opposition has been implying that we would be inflicting a great hurt on the people of Northern Ireland by forcing them to choose between moving towards a closer association with the Irish Republic and permanent direct rule from Westminster. Quite frankly, if these alternatives are considered in relation to my European vision, it immediately becomes apparent that a lot of fuss is being made about nothing.

"We are, as you know, now taking part as full members—in common with the Irish Republic—in building a unified Europe. This is not the place to discuss the detailed arrangements. But suffice it to say that our economic and monetary union plans will have the effect of vesting control over all the main aspects of members' economic, financial and social lives in Brussels by 1980. Which means that political unification will also, for all practical purposes, have reached a very advanced stage within six years.

A surrender

"We cannot have it both ways. To create the unified Europe of my vision, we must be prepared for a far-reaching surrender of all our sovereignties. So ask yourselves this question: How much control will be exercised by Ulster politicians, Dublin, the proposed Council for Ireland or London over the destinies of the Irish people—north or south of the border, Catholic or Protestant—once European unification becomes a fact? The answer is, of course, very little—whatever decisions are made now about Ulster's constitutional future.

"How absurd it is then, to portray direct rule of Ulster from London—or Dublin for that matter—as an anathema when all of us will soon be subject to direct rule from Brussels and any Parliamentary edifice it creates in Strasbourg to give itself a democratic facade.

"And in case the Ulster people should object to that on the grounds that they have not been consulted about it, let me remind them that the rest of the British people have not been consulted either. As I have often said, it is for the Government to take the decisions that are necessary in the national interest.

"We hear much about Ulster's loyalty to Britain. As Prime Minister, I have to tell you that this concept is being rendered as out-moded by the onward march of my European vision as the horse-drawn plough was by the tractor—and many times faster. What logic is there in Irishmen being loyal to Britain when Britain will herself soon be no more than a province of a European empire, having less independence from Brussels than Ulster had from Britain in the past?

Fainthearts

"The loyalty that makes sense from now on is loyalty to the Brussels autocracy. And the sooner we all come to terms with this fact of our new European life — wherever we happen to live—the better.

"Fainthearts will tell you that trying to turn Europe into one big happy family, whether its peoples want it or not, won't work. They point to the fact that [illegible] continually foundering on the rock of Flemish-Walloon friction, that there is growing concern throughout the Continent about racial strife arising from the influx of foreign workers and that, in our EEC councils themselves, the high ideal of European togetherness [illegible] in the breach [illegible] performance.

"As Prime Minister, I have no time for such defeatism. [illegible] the bigger the difficulties the more exciting the challenge. [illegible] people we are [illegible] a return of self-confidence [illegible] provided the nation [illegible] good sense to let [illegible]

"It is that [illegible] of home—[illegible] the leadership that Europe [illegible] [illegible] those who doubt [illegible] should observe [illegible] in Westminster [illegible] attention to it, and draw the appropriate conclusions."

THE LEX COLUMN

The new portfolio approach

Somebody will have to invent a word for it some time: perhaps "engroup" and "engroupment" will do, for the process of raising a portfolio investment to the status of associated company. A series of arbitrary or coincidental factors have meant that a trend is likely to develop along the lines of which Slater Walker has made some play, particular instances being Rockware, Costain and Nairn Williamson. Williams Hudson may have the same aim for Vickers and Baird Group for Butterfield Harvey. It makes sense.

Dividend limitation, the switch to the imputation tax system, and the present demoralisation of the equity market are three factors which might be picked out in a context where pro rata consolidation of 20 per cent. holdings is the norm. The first speaks for itself. The tax change links in with the state of the equity market, specifically because there is no evidence that investors have adjusted their p/e attitudes to the higher value inherent in a given ratio under the new system. The actuaries tables show that an average earnings yield of 9.9 per cent. compares with a net p/e reciprocal of 7¼ per cent.: gross dividend plus retained earnings tot up to 8½ per cent.

As to equity prices, one can only note that current earnings yields offer a handsome premium over the after-tax cost of money (say, 6½ per cent. or so), even though the latter is historically so high. Subjectively one might add that if there is a difference in the value of an investment to a strategic holder concerned with return on his money, on the one hand, and to the smallholder concerned with how much he can get for his shares, on the other, then this difference is great to-day.

This leads to the speculation whether the trend towards "engroupment" heralds a revival of the concept of investment for return, which for the "engrouper" or the purchaser of the whole of a company means long term earnings yield. The concept has been out of fashion ever since the word performance became a technical term in fund management.

We have seen the fallacies of conglomeration laid bare: certainly paper will continue to be arbitraged against assets but the process cannot now be the *raison d'être* of a company while memories are still fresh. We have seen the shares of the financial predator companies reduced to the state where discounts on real net worth are almost typical. In fact the widespread notion that investment performance is to do with arbitraging ratings has taken a heating of late.

Finally, the present context of the securities market would seem to be right for a return to the idea of long term investment. This will change when conditions are right for a full blooded bull (or bear) market. But we have undergone a fullish scale psychological bear market since May, 1972: so long as neither an acceleration in corporate profits growth nor a severe recession is in sight, an "investment" market looks a possibility.

CFP

One by one the top French companies are slumping up a £100,000-plus fee and obtaining a London listing; the latest, but not the last, is Compagnie Française des Pétroles, the Total group. Some 35 per cent. owned by the French State, CFP is the largest French industrial group judging by net income, and ranks eighth among the international oil majors, though in terms of crude oil output of 1.25m. barrels a day it is only roughly a third the size of BP.

In terms of figures the prospectus provides no surprises, unless it be that the London Stock Exchange has apparently accepted CFP's already published consolidations without any qualification. In fact CFP was something of a pioneer of consolidated accounts in France and has published them since 1965 (though they were not subjected to external audit until 1971). For analytical purposes, the most serious divergence of the accounts from U.K. practice is probably in the treatment of exceptional and prior year items, which has helped to produce what is an anomalous recent earnings trend for an international oil major (albeit with about 50 per cent. of its operations inside France).

Thus published attributable earnings actually rose 4 per cent. to Frs.578m. in 1972, a rock bottom year for everyone else, and were only 10½ per cent. higher in the first six months of 1973—a period for which many of the Anglo-Saxon majors showed doubled figures. But before exceptional items and minorities, CFP's net was a third lower in 1972, and the first half this year would have been up 32 per cent. but for exchange rate adjustments which would have been treated as exceptional under U.K. practice.

Strictly, therefore, the historic p/e at Frs.208 might be nearer 10 than the apparent 7.7. Even so, the obvious investment case for CFP—that it has a lower rating than either Shell or BP—remains intact.

Against that, however, come a string of counter arguments. It has a very high exposure to the political problems of the Gulf—the Middle East as a whole yielded 88 per cent. of group crude in 1972. While it has useful North Sea interests, including so far a quarter of the Frigg gas field and 4 per cent. of Ekofisk, these are nothing like so important as BP's or, proportionately, as Petrofina's. It may now be too expensive for CFP to gain a significant foothold in the U.S. market. And finally, there are signs that the French Government may be one of the more difficult to deal with in the coming squeeze between rising crude costs and controlled product prices.

On the other, net worth comparisons could have some relevance, for on strictly book figures BP sells at a premium whereas CFP's net assets run to Frs.290 a share. One intriguing side effect of the sale by BP of its Abu Dhabi stake to the Japanese was that the parallel CFP interest was effectively valued at Frs.170 a share. But these days, politically safe crude is the only kind that can count for much in share prices.

Concorde to make critical Atlantic test flight

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

THE CONCORDE supersonic airliner will be given one of its most critical tests this week when it flies non-stop from Dulles Airport, Washington, to Paris Orly on Wednesday at the end of its brief first visit to the U.S.

This will be its first non-stop Atlantic crossing. On the way out to the U.S. it stopped at Las Palmas in the Canary Islands, and Caracas, in Venezuela. Wednesday's flight will be used to demonstrate Concorde's range-payload performance, as part of its overall flight test programme.

Reception

Reports from the U.S. indicate that Concorde's reception has been better than its manufacturers, the British Aircraft Corporation and Aerospatiale, had expected, with comparatively few complaints about noise levels and pollution.

It remains to be seen whether the trip will result in any changes of mind by U.S. airlines, who have so far declined to place orders for the aircraft.

The manufacturers, however, have not been specifically looking for contracts on this visit.

The recent announcement that they have been drawing up plans for leasing the aircraft could help materially in encouraging would-be buyers who do not necessarily have substantial sums available with which to acquire aircraft outright.

Having penetrated the U.S. for the first time, the manufacturers will probably take Concorde there frequently in future, especially during next year, when the route-proving and crew familiarisation side of the flight test programme gets under way.

In the meantime, lack of firm orders is the main worry, and this could result in the production programme being slowed this winter.

As already reported in the Financial Times, the two Ministers in charge of the programme, Mr. Michael Heseltine, U.K. Aerospace Minister, and M. Yves Guena, the French Transport Minister, are due to meet late in October or early November to consider this problem of future production.

The manufacturers on both sides of the Channel are drawing up detailed reports that will show just how far they think Concorde production can be reduced without damaging the complex infrastructure of component and equipment suppliers.

Although there is no intention at this time of the two Governments pulling out of Concorde, it is clear that the present rate of production, aimed at rising to 30 aircraft a year by 1975, cannot be sustained without a considerable inflow of orders.

Situation

Until these materialise, the two Governments will be obliged to reconsider the present production situation. The slow-down seems likely to be achieved by running down both assembly lines in Filton and Toulouse.

The political and industrial difficulties of cutting out one assembly line entirely are considered so great that this solution is virtually certain to be dismissed.

RCA may take over Oriel Foods

By Nicholas Owen

ORIEL FOODS, the group run since early this year by Mr. James Gulliver, former chairman of Fine Fare supermarkets, may be taken over by the U.S. RCA Corporation.

The two companies stressed yesterday that "no agreement has been reached and that discussions to date are exploratory in nature." It is expected that a decision will not be reached until early November.

Oriel, which has expanded quickly under Mr. Gulliver's management, is currently capitalised at £6.8m., with the shares at 133p after a 10p rise on Friday.

New shares

After Mr. Gulliver had spent seven years at Fine Fare—a subsidiary of Associated British Foods—he and associates bought 30 per cent. of Oriel and he became chairman and chief executive. New shares have been issued in connection with acquisitions since then, and his own stake is now just under 20 per cent.

Mr. Gulliver's shareholding was bought from Ralli Brothers (Trading), which had owned just under half of Oriel. Ralli, now part of Bowater, has a current interest of just under 10 per cent.

Mr. Gulliver said that discussions with RCA started a few weeks ago. Initially, the two sides discussed "opportunities in this country and in Europe," and from this was born the idea of a takeover. RCA expressed interest in Oriel's investigations into possibilities on the Continent.

Mr. Gulliver emphasised he would not relinquish his management role with the Oriel organisation if a deal is agreed.

Both he and RCA talked yesterday of Oriel's executive strength. Apart from Mr. Gulliver, this includes Mr. Alistair Grant, formerly Fine Fare's marketing director, and Mr. David Webster, who came from William Brandt's, the merchant bank which put together the original Gulliver deal.

Turnover

Three acquisitions have been made since Mr. Gulliver moved in: A. B. Gibson, a Nottingham grocery business, was bought in April, followed in August by 15 cash and carry depots operated in the Midlands and East Anglia by Burton, Allton and Johnson. Two months ago, a Liverpool-based refrigerated storage and distribution company was acquired.

Oriel's original business was primarily the processing of edible oils. Turnover is now running at £50m. annually, more than double the rate before Mr. Gulliver's appearance. Some £40m. is derived from wholesaling, half in cash and carry.

See Men and Matters, Page 18

SDLP prepares for role in government

BY RHYS DAVID BELFAST, Sept. 23.

A SERIES of committees to prepare economic and social policies for when the Northern Ireland Executive is established has been set up by the Social and Democratic Labour Party, the main group representing the minority in the new Assembly.

The committees cover, among others, education, communications, the economy and cultural matters, and can be seen as further evidence of the party's readiness to take part in Northern Ireland government.

Minority status

Assemblymen, party officials and some rank-and-file members have been serving on the committees, which have worked quietly and without publicity for some time. The first reports, which will represent an expansion of ideas outlined in the party's manifesto for the Assembly elections, are likely to be published shortly.

If an executive is formed—the three main parties, SDLP, Unionists and Alliance have not yet reached the stage of holding formal meetings to make the necessary arrangements — the SDLP will emerge with a minority of the seats, and so will not be in a position to push its policies through.

The SDLP hopes, however, that its efforts can be the basis for discussion, and the move seems likely to concentrate the minds of the other political parties on formulating in greater detail the plans they would like to see adopted for the reconstruction of Northern Ireland.

The SDLP's attitude would appear to be that it is not going to miss the opportunity to play a significant part in shaping events in the North if an executive is formed. A leading party official told me. "This is the first time the minority community has been able to influence policy, and the first time we have been able to try anything like this. The executive debate will have to proceed on two levels—who does what job and what jobs are to be done—and the policy committees are to make sure we are prepared."

The very slow progress made by the parties in coming together since the elections nearly three months ago has been a cause of concern to the Government, and the parties were told in effect by Mr. Heath on his visit to Belfast last month to stop dragging their feet.

The SDLP view is that the last three months have been valuable in clarifying the positions held by the parties likely to enter an executive. For example, over the question of policing, the degree of change which the SDLP wants and which the Unionists will accept has become clear, and the gulf between the parties has been seen to be possibly not irreconcilable.

Slow progress

Party officials maintain that it is better to make progress slowly in this way rather than risk the chances of co-operation by too hasty manoeuvres. The decision to look at policies in detail is a clear indication of the SDLP's basic commitment to making the executive work, providing it can be formed on terms acceptable to the minority.

Agnew resists resignation calls as court battle looms

BY ADRIAN DICKS WASHINGTON, Sept. 23.

VICE-PRESIDENT Spiro Agnew is continuing to resist the strong pressures on him to resign, and is planning to challenge on constitutional grounds the Federal investigation against him, according to Press reports.

A long and complex court battle between the Vice-President and the Justice Department now looms as the Senate Watergate Committee prepares to resume its public hearings to-morrow, with President Nixon still deadlocked with the special prosecutor Dr. Archibald Cox, over the tapes of the President's conversations about Watergate.

Mr. Judah Best, a lawyer acting for Mr. Agnew, said yesterday that he would file motions in the U.S. District Court in Baltimore this week seeking to prevent the Justice Department from bringing evidence which might lead to criminal indictments against Mr. Agnew before a grand jury investigating bribery and corruption in Maryland during his term as Governor.

One motion would claim that Mr. Agnew could not be indicted unless he had first been impeached and removed from office by Congress. Lawyers believe no final decision could be reached on this unprecedented constitutional point short of the Supreme Court.

The dismal prospect now opens up that both the President and Vice-President will be the objects of simultaneous efforts by prosecutors to make them co-operate with normal criminal investigations.

The latest development in Mr. Agnew's case follows the reported breakdown of highly secret "plea bargaining" negotiations between his lawyers and Mr. Elliott Richardson, the Attorney-General.

According to the Washington Post, the object of the Justice Department, which is prepared to let the grand jury hear the evidence against Mr. Agnew, was that he should resign in order to plead guilty to one minor charge, in return for which other graver charges, would be dropped.

Prejudiced

Mr. Agnew was said to be insisting that he would not resign unless all the charges against him were dropped. He was said this week-end to be in fighting form, and his spokesmen have announced the launching of a defence fund.

Another tactic Mr. Agnew's lawyers are expected to use this week is the complaint that his case has been prejudiced by "leaks" from senior White House officials eager to see him forced out. Mr. Agnew is thought to have insisted, during his private meeting with President Nixon last Thursday, that the leaks, attributed to Mr. Melvin Laird, the President's chief domestic affairs adviser, and Mr. Leonard Garment, who succeeded Mr. John Dean as the President's legal counsel, be stopped.

The Watergate hearings resume to-morrow with testimony from Mr. E. Howard Hunt, the former CIA man who took part in and devised some of the "dirty tricks" mounted by the White House and by the Committee to re-elect the President as well as in the Watergate burglary itself.

This second phase of the hearing is not expected to lead to anything like the earlier dramatic disclosures. Its main objects will be to fill in some of the gaps and to tackle more general issues of campaign behaviour raised by the affair.

The Republican members of the committee are eager to get the hearing over with by the end of next month, and the Democrats appear to be as fearful as ever of the "backlash" that could hit them if they are seen by the public to be hounding the President, or else wasting time with an issue that is losing its appeal.

Committee of 20 sets July deadline

BY PAUL LEWIS NAIROBI, Sept. 23.

THE WORLD'S leading Finance Ministers to-day sought to give a new sense of political urgency to the task of monetary reform by agreeing to make July 31 next year their deadline for agreement on the main lines of a new international system.

They were able to wind up their latest meeting in the IMF Committee of Twenty here relatively optimistically, even though they had conspicuously failed to make any progress on the main issues.

While the Ministers have sought to inject a new political [illegible] into their flagging discussions on the eve of the annual IMF meeting, it is clear they remain for the moment as [illegible] divided as ever over the shape of the new system they are trying to construct.

During the next 10 months, they plan an accelerated work programme for themselves and their deputies designed to [illegible] their talks to cover [illegible] aspects of the reform negotiations in preparation for final agreement by next summer's deadline.

They have decided to switch their attention from the vexed questions of exchange-rate adjustment rules and convertibility on which the U.S. is still at loggerheads with the Common Market, and concentrate instead on other matters such as the role and status of the Special Drawing Right (SDR) as the pivot of a reformed system.

Progress

To-morrow, Mr. Ali Wardhana of Indonesia, chairman of the Twenty, will present in his own name a report listing the main areas of agreement and dissent and the principal options before the members that will form the basis for the committee's work in the coming months.

The Ministers are likely to meet again next January and again in June before their final session in July, which may well turn into marathon bargaining talks covering all aspects of the reform package.

This morning Mr. George Shultz, U.S. Treasury Secretary, said the decision to adopt a deadline showed some progress, despite the impatience many members showed with the amount achieved so far and the many unresolved disagreements.

He planned to consult bilaterally with many of the principal trading partners of the U.S. during the weeks ahead, in an effort to speed the reform talks.

This is the first time Ministers of the Twenty have formally and collectively endorsed a time-limit for a full agreement. In attempting to observe it, it is also clear they are changing the negotiating strategy they have followed so far in their reform discussions.

A number of countries had originally pushed for an early outline agreement on new exchange rate rules and restoring convertibility to the dollar as evidence of the Committee's determination to succeed.

Stronger

Having failed to get far on either topic so far, the Twenty are anxious to broaden their discussions to take in other neglected aspects of the reform which would pave the way for a comprehensive package agreement on the whole system next summer.

By then, the U.S. balance of payments should also be stronger, which may reduce Washington's reluctance to see the dollar become convertible again. The GATT trade talks will also have advanced further.

This morning, however, Dr. Jelle Zijlstra, Dutch Central Bank Governor, suggested any lasting agreement might be difficult, until common measures have also been devised for dealing with the oil-producing nations' surplus currency holdings.

Even if Ministers succeed in tying up a new monetary agreement next summer, it will take some time to translate this into a legal text for adoption by the IMF Board, while parliamentary ratification may require a further year or so.

However, this morning, Mr. Shultz said he hoped parts of the agreement might be brought into force before all the legal formalities had been completed.

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Kenya claims £7.5m. bill, Page 27

Weather

U.K. TO-DAY

BRIGHT start, with sunny [...] for much of Britain, [...] spreading to W. areas lat[er].

London, Cent. S., E., Cen[t.] and N.E. England, E. Mid[lands], Channel Isles
Mainly dry, sunny spells, [...] variable, light. Max. 16C [...]

S.E. England, E. Angli[a]
Mainly dry, sunny spells, coastal showers. Wind [...] variable, light. Max. 16C [...]

W. Midlands, S.W. and [...] England, Wales, Lakes, I. of [...]
Dry, sunny spells, rain [...] Wind variable light, bec[oming] fresh. Max. 16C (61F).

Borders, Edinburgh and E. [...]land, Aberdeen, Moray Fi[rth]
Dry, sunny spells. [...] variable, light, becoming moderate. Max. 15C (59F).

S.W. Scotland, Glasgow, A[...] N.W. Scotland, N. Irela[nd]
Cloudy, some rain. Hill [...] Wind moderate, increasing [...] to gale. Max. 14C (57F).

Cent. Highlands
Dry, sunny spells, bec[oming] cloudy, rain later. Wind var[iable] light, becoming S. fresh or st[rong]. Max. 14C (57F).

Caithness, Orkney, Shetl[and]
Mainly dry, sunny spells. [...] variable, light. Max. 12C [...]

Outlook: Cloudy, rain at t[imes] becoming mainly dry [...] England, Wales and S.E. Scot[land].

Lighting-up: London 1[...] Manchester 19.34, Glasgow 1[...] Belfast 19.40.

BUSINESS CENTRES

	Y'day Mid-day	°C	°F			
Amstrdm.	F	13	55	Manchstr.	C	[illegible]
Athens	F	27	81	Melbourne	C	[illegible]
Bahrain	S	33	93	Mexico C.	S	[illegible]
Belfast	C	15	59	Milan	C	[illegible]
Belgrade	F	21	70	Montreal	C	[illegible]
Berlin	C	17	63	Moscow	F	[illegible]
Birmghm.	C	14	57	Munich	C	[illegible]
Bristol	F	14	57	Newcastle	F	[illegible]
Brussels	C	11	52	New York	S	[illegible]
Budapest	S	21	70	Oslo	R	[illegible]
B. Aires	S	23	74	Paris	C	[illegible]
Cairo	S	31	88	Perth	R	[illegible]
Cardiff	C	15	59	Prague	C	[illegible]
Cologne	C	15	59	Reykjavik	R	[illegible]
Copnhagn.	S	16	61	Rio de J'o	R	[illegible]
Dublin	F	14	57	Rome	C	[illegible]
Edinb'rgh	C	15	59	Singapore	S	[illegible]
Frankfurt	C	13	55	Stockholm	C	[illegible]
Geneva	C	14	57	Strasbourg	C	[illegible]
Glasgow	F	15	59	Sydney	C	[illegible]
Helsinki	S	7	45	Tehran	S	[illegible]
H. Kong	S	27	82	Tel Aviv	S	[illegible]
Jo'burg	S	21	71	Tokyo	C	[illegible]
Lisbon	F	20	68	Toronto	C	[illegible]
London	S	14	57	Vienna	F	[illegible]
Luxembg	C	10	50	Warsaw	S	[illegible]
Madrid	F	18	64	Zurich	C	[illegible]

HOLIDAY RESORTS

	Y'day Mid-day	°C	°F			
Ajaccio	C	22	72	Las Plms.	F	[illegible]
Algiers	C	25	77	Locarno	T	[illegible]
Barcelona	C	21	70	Luxor	S	[illegible]
Biarritz	C	12	54	Majorca	C	[illegible]
Blackpool	C	14	57	Malaga	F	[illegible]
Bordeaux	R	16	61	Malta	S	[illegible]
Boulogne	C	12	54	Nairobi	S	[illegible]
Casablnca.	F	24	75	Naples	C	[illegible]
Cape Tn.	C	18	64	Nassau	R	[illegible]
Corfu	S	28	82	Nice	F	[illegible]
Faro	S	26	79	Oporto	S	[illegible]
Florence	C	22	72	Rhodes	S	[illegible]
Funchal	F	23	73	Salzburg	S	[illegible]
Gibraltar	S	24	75	Tangier	F	[illegible]
Guernsey	F	14	57	Tenerife	D	[illegible]
Innsbruck	F	15	59	Tunis	F	[illegible]
Inverness	C	12	54	Valencia	C	[illegible]
Istanbul	S	24	75	Venice	S	[illegible]
Jersey	F	15	59			

S—Sunny. C—Cloudy. F—Fair. R—Rai[n]. T—Thunderstorm. D—Drizzle.

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